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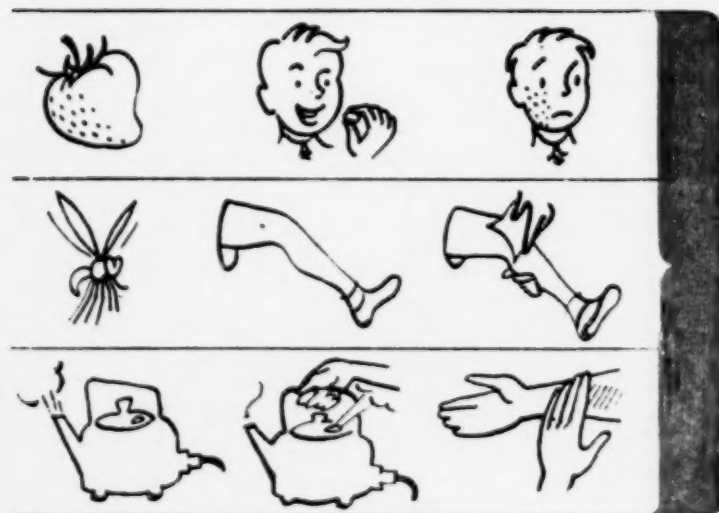
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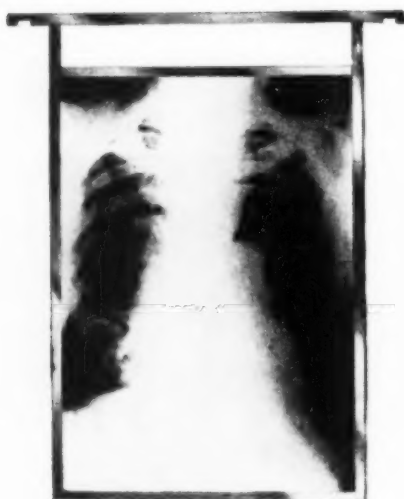
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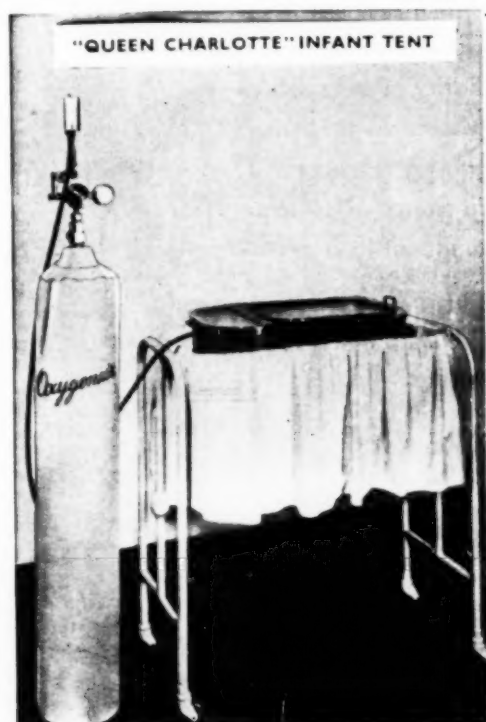
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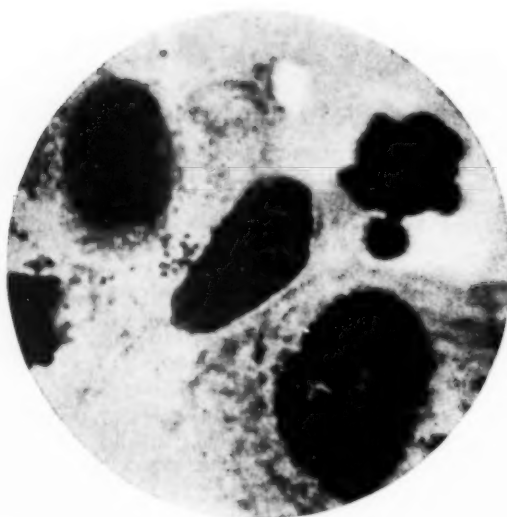
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THE FILM IN MEDICAL EDUCATION

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South African Institute for Medical Research, Johannesburg

The value of the film in education is well recognized. Psychologists have determined that 90% of learning is through the eyes and 5% through the ears, while the remaining senses can contribute the mere remaining 5%. Thus, a sound film, stimulating both sight and hearing, markedly increases efficiency in learning. Experimental studies in America have shown that school-children taught by films show almost 40% superiority in achievement over comparable groups without films. This applies equally to adult education, and United States Army training revealed that more was learned and absorbed in a 15-minute film than a 2-hour lecture, and that films cut 40% from previous training time. It is thus not surprising that the United States Army outlawed the classroom lecture as the poorest form of teaching.

An investigation was carried out by Hannah Steinberg and H. E. Lewis¹ to assess the value to a second-year physiology class of a film dealing with a specialized physiology problem—Schweitzer's film on the carotid sinus. This investigation showed significant increases in knowledge of the subject by a group of students to whom the film was shown, as compared to a control group who had received the identical basic instruction on the subject but did not see the film. Another group who saw the film after a number of questionnaires on the subject derived even greater ultimate benefit. This suggests, as one could expect, that previous preparation enhances the value of the film.

This survey indicated another important aspect—the attitude of the students themselves to the desirability of films. Until recently the average student regarded the technical film as a poor attempt to copy the entertainment film of the cinema; but this attitude has been disappearing rapidly as the students realize that they are now receiving well-prepared instruction in their technical subjects, and that their knowledge is being greatly enhanced by the films; and to-day students are overwhelmingly favourable towards, and fully appreciative of, this method of education.

In teaching, a correct approach increases the value of the lesson or lecture, and this applies equally to audio-visual education. It has been said that a film is a blank cheque, the value of which must be filled in by the

instructor, and this value is determined by the skill and care with which the instructor carries out his preparations, his presentation and his follow-up. He must be aware that learning is not an osmotic process, but a reaction requiring active mental participation. The student should be prepared and intellectually stimulated to such an extent that he will observe important details in the film and draw essential inferences—not merely be exposed to them. The key to this lies in the criterion that the student must be made to feel that the film is of vital importance to him.

PROJECTION CONDITIONS

The standard of quality in educational projection ought, if anything, to be higher than that of the commercial cinema. Ideal conditions for projecting and viewing motion pictures cannot be defined in exact terms. They depend on an inter-relationship between the size of the screen, the type of screen surface, and the light output of the projector. These factors, and their bearing on the needs of visual physiology have been discussed by G. H. Bell.²

Size of Screen and Seating Area

The minimum size of the screen is determined by the finding that the greatest distance at which all the details of the picture can be easily seen is not more than 6 times the width of the screen. A position too near the screen, on the other hand, results in lack of sharpness, which causes eye strain, presumably because the ciliary muscles are continually in action in an attempt to adjust the accommodation to bring the unsharp images into focus. Moreover, at the front of the room, where the visual angle subtended by the screen is large, excessive eye movements are needed to follow the action, and this is apt to produce fatigue, and may reveal a flicker which is not seen when the gaze is maintained.

The critical frequency of flicker alters with dark adaptation, and for this reason it is important to allow a few minutes of dark adaptation before showing the film, if the audience has entered the cinema from the brightly lit exterior.

As the angle from the viewer to the line of screen

becomes more obtuse, the distortion becomes greater. Ideally, the film should be viewed in a direct line with the projector, but for normal satisfactory viewing the angle should not exceed 30°.

Based on these views, the Committee of the Society of Motion Picture Engineers² has recommended that (a) the picture width should be equal to one-sixth the distance of the farthest row of seats to the screen, (b) no seat should be closer to the screen than twice the picture width, and (c) no row of seats should be longer than its distance from the screen.

Screen Surface

The quality of screen surface depends on the coefficient of reflection of the screen. The best screen surface is mat, made with flat white paint or fabric. In such a screen the coefficient of reflection differs by no more than 25% between the brightest and darkest parts, and this may easily pass unobserved.

A much greater difference exists with beaded screens, which consist of small glass beads which throw back most of the light to the line of the light source. It follows that when such a screen is viewed from too close, or from an angle of more than 20° from the line of screen, the coefficient of reflection becomes too great to be tolerable. Accordingly, with a beaded screen, no seats should be closer than 2½ screen widths away, and such a screen is of use only in a long narrow room.

Screens covered with fine particles of aluminium need be mentioned only to be condemned, because of the high reflection coefficient. Moreover, aluminium screens are colour-selective, and are thus unsuitable for colour films. Their only place is in the projection of stereoscopic films by polarized light, for which a mat surface would be unsuitable, as a mat surface destroys polarization.

The area around the screen should be dull and featureless to prevent wandering of the attention. A grey border may be better than the more usual black one.

Light Output

Too bright a light will cause flicker, graininess and dazzle. If the light is too weak the picture quality suffers, and detail cannot be seen from the back of the room. The light output should be calculated accurately from the formula:

$$\text{Light output in lumens} = \frac{\text{Desired brightness in ft.-lamberts} \times \text{Area of screen (sq. ft.)}}{\text{Screen reflection coefficient}}$$

The quality of the picture suffers if the room is not adequately darkened, but complete darkness is neither necessary nor desirable, and a general room light of one-tenth foot-candle, with which it is just possible to read newsprint, is not harmful, and may be of great value in maintaining class discipline, and in allowing the students to take notes.

REQUIREMENTS OF A TEACHING FILM

The ideal requirements of a teaching film relate to the film content and its teaching efficiency.

Film Content. It is accepted as axiomatic that the film

must be technically first-rate, with correct exposure, colour and tone-rendering, with steady sound volume and correct sound synchronization. Effective use should be made of such aids to visual expression as slow-motion, time-lapse and photomicrography, to depict action which is too fast, too slow, or too minute to be visible to the unaided eye.

It is important to remember that the audience sees very little except what is in the centre of the screen, and any action taking place in a corner of the screen may be missed completely.

The film should contain only essential matter, with no padding, and the ideal teaching film should not be longer than 20 minutes.

Teaching Efficiency. The first requirement is relevancy, with close integration of the film into the concepts and objectives of the course of study. The film structure should facilitate teaching and learning. This requires a motivating introduction, several clear-cut units linked by logical transitions, a summing-up of evidence, a conclusion and possibly a recapitulation with a demonstration of practical applications.

The film should adhere to concrete realities, avoiding verbalistic and abstract symbolism beyond the comprehension of its intended audience.

The film should follow accepted laws of learning. Thus the problematic situation should be presented with sufficient data for hypothesis and testing, and the audience should be led inductively to a satisfying solution in the conclusion. For this reason the sequences should be logical and understandable.

Critical Sincerity. Both sides of a controversial matter should be presented with equal sincerity, and the film should be free from undesirable propaganda, half-truths, equivocations and prejudices of one or other type. One must beware of the danger that a film may employ the persuasiveness of sound and picture to lull the audience into acceptance and belief rather than to critical examination and suspended judgment. It is in this regard that the need is greatest for the supervision of the teacher, who must realize that the film is no prefabricated lecture prepared by a stranger and imposed upon the lecturer; rather it is an aid of the same calibre as the epidiascope slide, and far from destroying individualism in teaching, the ideal film can serve to enhance the teacher's efficiency.

When films are shown, only good equipment should be used, for nothing is more likely to nullify the advantages of the film lesson than a break in continuity due to projector break-down. Another interruption in continuity of thought-process results from blacking out of the lecture theatre during the course of the lecture, and it is advisable to have the lecture theatre ready for the showing of the film at the commencement of the session.

Films must not be regarded as an unscheduled extra, beyond the normal requirements of a systematic course, to be shown to fill a gap in the lecture time-table. It is a mistake too to show several films at one session, for the result is a failure to assimilate the information contained in so many films; moreover, the showing of several films in one session leaves no time for discussion of their content.

Films lose much of their value if shown to a group of students who are unaware of what to watch for, and

films should be shown only after preliminary study of the subject. After an initial showing, the film should be repeated with the commentary cut off, to enable the lecturer to emphasize points which he regards as important. This should be followed by a general class discussion of the film content, and a further showing of the film at this stage will integrate the concepts gained, and will strengthen aural and visual impressions. A final showing at some later stage will consolidate the subject better than any other method of revision.

USES OF THE MEDICAL FILM

Films can contribute to medical education in many ways, and the following are some of the indications for the uses of the medical film.

a. To demonstrate techniques and clinical cases not readily available when required; e.g. the illustration of various abnormal gaits. Without the aid of films clinical teaching must of necessity be unsystematized, being dependant on material available in the wards. How much more satisfactory would be a scheme whereby a series of films could be available to illustrate the relevant clinical findings of any disease, and the systematic study of clinical medicine and surgery could be pivoted around these films.

b. Students must become skilled in the proper handling of the sick. The skills which must be learnt vary from elicitation of physical signs to anaesthetic procedures, minor surgical procedures of suturing, dressings, removal of foreign bodies from the eye, intravenous infusions, paracentesis, catheterization. These skills are learnt by precept and example, followed by practice on patients who are already ill. Personal instruction and guidance is the ideal, but this is hampered by overcrowded classes with inadequate facilities, when so often students at the outskirts see little more than the heads of the more fortunate front row, and even the privileged front row sees little more than the operator's hands. Slow motion and close-up photography would serve a very useful purpose here.

c. Topics difficult to illustrate by other means can be simplified, and the abstract can be made concrete and realistic. Thus, the embryological development of 2 or 3 months can be shown in the course of a 10-minute film with the aid of time-lapse photography. Animated diagrams (the so-called cartoon) would facilitate explanations of the mechanism of labour, the anatomy of hernias, the action of the heart valves. A sound film on this last-named subject would help considerably in the understanding of the interpretation of murmurs, and the physiological and pathological factors involved.

d. The film serves as an easy method of revision in easily digested and readily remembered form. This would be of value to the busy practitioner, who would thus be afforded the opportunity to refresh and revise his knowledge of many medical topics.

e. By seeing films made at other centres, and by noting views and techniques which may differ from those of their own teachers, students will develop a wider and more critical outlook. The attainment of a correct perspective is helped by an appreciation of medical history, which is well illustrated by films. In like manner, general topics

related to medicine can be introduced into the medical curriculum by the showing of films on health services, rehabilitation, the work of allied professions—subjects not related to technical training in the strictest sense, but none-the-less important in the moulding of the medical student.

f. The film is of value in research. R. MacKeith (1949)¹ quotes the cineradiography of Franklin and Barclay, by means of which they were able to make records of the circulation in sheep embryo, and by this means they were able to obtain information on the actions of the foramen ovale not obtainable by other means. Cinephotography could be equally important in the study of angiography, the coagulation mechanism, tissue cultures and vital staining reactions, to mention but a few of the numerous fields of work which could be advanced by the film.

In the study of patients before and after treatment, photographic and film records can be most instructive. A clinical impression of the effect of treatment is often influenced by a desire for improvement, whereas the film records suffers no such foibles. This is also of particular value in the study of long-term therapy in chronic cases, such as cerebral palsy, where progress may be slow, and may pass almost unnoticed if not compared with an earlier stage.

g. To-day the education of the lay public in health subjects is a recognized part of the work of the doctor. This can be simplified with the help of the many good films available on health education. Other audience-groups for whom films are of value, are the medical auxiliaries (nurses, physiotherapists, radiographers, laboratory technologists) and paramedical personnel (health visitors, social workers and almoners)—people whose work brings them into contact with certain aspects of medicine, but who are concerned with the side-issues, and who require some fundamental knowledge of the broader principles of medical practice.

AVAILABILITY OF FILMS

As long ago as 1897, 2 years after the first public cinema show in Paris, Braun filmed the mammalian heart, and Schuster made records of abnormal gaits. Over the years many hundreds of medical films have been made by individual doctors, by commercial photographers on behalf of doctors or institutions, and by commercial drug houses for prestige purposes or to bring their products before medical audiences; and more recently medical films have been produced by Government bodies in various countries. The development of these official film units was stimulated during the war, with the realization of the major importance to the war effort of the people's health.

Lack of organization prevented adequate utilization of medical teaching films in Great Britain until the Scientific Film Association² in 1948 catalogued the medical films existing in that country, and indicated the availability of some 800 films of varying teaching value. At several universities committees were established to encourage the use of films by faculties, and at Cambridge University a Film Council was established to 'promote the use of films in higher education and for the purpose of academic research'.³ The position of the scientific film in Great

Britain was reviewed by Blodwen Lloyd⁷ in 1948. The most recent development has been the establishment of the British Universities Film Council, the functions of which is described by G. K. Clark.⁸

In South Africa the position is less satisfactory. S. M. Lewis (1951)⁹ lists approximately 600 films available in this country, but many of these films are unsuitable for university and post-graduate medical education. The need exists for the establishment of a technical film library to cater for university needs in much the same way as the Education Department Film Library caters for schools.

There is an urgent need in South Africa for the establishment of a University Film Council, to advise on the selection of suitable films, and in the production of new films to act as a liaison between the film-makers and the university teachers who hope to make use of the films. This will obviate the frustration which has resulted from the fact that the great majority of present-day medical films have been produced with no attempt at coherent planning of a series, and with no appreciation of the need to have the film fit into an existing or proposed curriculum. An individual or group may become enthusiastic over an item of knowledge which is accorded only a few minutes consideration in the medical curriculum, and on this is made a film of half an hour or even longer duration. This

emphasizes the need for an advisory body to direct into useful channels the great expenditure of energy and finances required in the production of a film.

With the establishment of a Medical Film Library, and the resultant availability of films to illustrate various aspects of medical education, we shall have taken a forward step in the training of medical students, and we shall be able to develop what is a potentially powerful force in university education.

I have to thank the Director, South African Institute for Medical Research, for permission to publish this article.

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ABSTRACTS

Levy, J. S. and Talley, R. W. (1952): *Effectiveness of Balarsen (Mercaptoarsenal) in Treatment of Amebiasis, Gastro-enterology*, **22**, 588.

Since none of the drugs which are in common use to-day for amebiasis have proved completely satisfactory, Levy and Talley have used a new arsenical which was developed for the treatment of yaws. It is a cyclic arsenical compound (N-2-acetyl-amino-4-methylolcycloethylenedimercaptoarsenophenol) which is prepared from the interaction of 3-acetyl-amino-4-hydroxy phenylarsenoxide and mercaptopropanol (BAL). Animal studies have demonstrated a low toxicity for mice, rats, and guinea pigs. These animals tolerate an oral dosage which is from 5 to 40 times the maximal clinical dose. The drug is known under the name of balarsen.

All patients in the University of Arkansas Hospital or the clinic who were found to have either the cysts or the trophozoites of *Endamoeba histolytica* in the stool, were referred to the Department of Gastro-enterology for treatment. Balarsen was given in doses of 10 to 20 milligrams per kilogram of body weight to a maximum of 1.0 gram daily, for 5 successive days. When it was possible, the patients were hospitalized. Daily examinations of stools were made during the treatment, and for 4 to 7 days following the last dose. Those who were not hospitalized were examined a day or two after the 5-day course of treatment had been completed. Sigmoidoscopic examinations were made on all patients in the hospital upon completion of the treatment and on all follow-up visits. Patients were requested to return at monthly intervals.

The diagnosis of amebiasis was established in 25 cases. Cysts alone were found in 10 patients; cysts and trophozoites were found in 13; and trophozoites alone were found in only two. Seven patients had been treated previously for amebiasis with recurrence of symptoms. It could not be determined whether these were cases of relapse or re-infection.

Balarsen was effective in 23 of 25 cases, with one 5-day course of therapy. A second course of treatment (one course of 5 days, and one course of 10 days) was effective in the 2 cases which still had positive stools after the first course. Eleven of 12 patients who were followed for one full year, had negative stools at the end of the year. These results

compare favourably with those of other drugs. Balarsen has the advantage of a short course of therapy, of ease of administration, of low toxicity, and of being inexpensive.

A Case illustrating the Bone Lesions seen in Cases of Extra-Venereal Treponematoses in the Bechuanaland Protectorate. Merriweather A.M. (1953): *Trans. Roy. Soc. Trop. Med. Hyg.*, **47**, 242.

In Bechuanaland the local name for endemic syphilis is 'dichuchwa' and indicates a combination of mucous patches, condylomata, superficial skin lesions, hoarse voice and aching legs. It occurs in children and is a family disease. Many untreated cases after months or years develop bone lesions producing great deformities which appear to be identical with the bone lesions of late bejel.

The case described is typical of many. An African girl of the Bakwana tribe when about 8 years old developed anal condylomata and was treated with 6 injections of acetylarsen. At the age of 14 the arms and legs began to swell. When examined at the age of 16 there were painless smooth large swellings of the left radius and both tibiae. Radiological examination showed broadening of the bones, and extensive cortical areas of rarefaction with surrounding dense sclerosis. The lower end of the left radius and the upper end of both tibiae were affected. The Eagle test on the blood was positive but the spinal fluid was normal.

Penicillin Anaphylaxis, Non-fatal and Fatal Reactions. Feinberg, S. M., et al. (1953): *J. Amer. Med. Assoc.*, **152**, 114.

The major toxic symptoms occurring after the administration of any type of penicillin administered by any route are: urticaria, asthma, shock, cyanosis and unconsciousness. Fatal reactions are rare, only 5 have been noted in the literature.

The authors recommend that penicillin should not be given for trivial conditions; that the patient be questioned about his allergic status; and that if possible skin tests be employed in detecting penicillin-sensitive patients.

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VAN DIE REDAKSIE

GENEESKUNDE—'N TEGNOLOGIE OF 'N PROFESSION

Nog nooit van tevore het die geneeskunde—helend of voorbehoedend—sover en so vinnig gevorder nie as gedurende die afgelope dekades. Ofskoon van hierdie feit terdeë bewus, verkeer die mediese professie nogtans vandag in 'n toestand van onsekerheid en kritiese selfondersoek. Tot 'n groot mate is die verhouding tussen die twee verskynsels dié van oorsaak en gevolg.

Die enorme uitbreiding van kuns, wetenskap en tegniek op geneeskundige gebied lei gestadiglik tot die onderskeiding van nuwe spesialiteite en die vermeerdering in die aantal spesialiste. Die enger die spesialiteit die groter die neiging tot daardie enghed van opvatting oor geneeskunde wat die alledaagse kommentaar uitlok dat dit die pasiënt is wat behandel moet word en nie die siekte nie.

Die vermenigvuldiging van tegnieke en hul uitwerking neig meer en meer om geneeshere in tegnici te verander. Dit word gebiedend noodsaaklik om dit te beklemtoon dat die stam van die boom van geneeskundige kennis die studie van die pasiënt as 'n menslike wese in sy geheel is, met 'n verstand sowel as 'n liggaam, en in verhouding tot sy hele omgewing. Die spesialiteite kan met die sytakke van die boom vergelyk word wat alhoewel hul nodig is vir die groei en ontwikkeling van die boom desnietemin hul eie lewenskrag alleenlik kan behou in soverre as wat hul in harmonie met die stam lewe. Die takke kan nie fungeer nie as die stam verrot; ook nie die wortels nie, wat in hierdie beeldspraak gespesialiseerde navorsing voorstel.

Uit hierdie beskouings verrys die vrees dat die aanwas in spesialispraktijk die essensiële wese van geneeskunde as 'n professie in gevaar kan bring; en verswak daardie wese dan verswak die diens wat geneeskunde aan die mensdom lewer, niesteenstaande die spesialispruise se tegniese bedrewenheid. Die prestasies van spesialisasie is alombekend en word terdeë begryp. As die geneeskundige professie 'n juiste ewewig wil behou dan moet meer aandag gewy word aan geneeskunde as 'n essensiële geheel afsonderlik van spesialisasie en tegnieke.

EDITORIAL

MEDICINE—A TECHNOLOGY OR A PROFESSION

In no previous era has medicine, whether curative or preventive, advanced with such great or such rapid strides as in recent decades. Yet although the medical profession is in no doubt of this fact, it is today passing through a period of uncertainty and critical self-examination. To a great extent the two phenomena stand in the relation of cause and effect.

The vast expansion of the science and art of medicine and its techniques is resulting in the gradual differentiation of new specialties and the multiplication of the number of specialists. The narrower the specialty the greater is the tendency to that narrowness of the conception of medicine, the realization of which provokes the trite observation that it is the patient that has to be treated, not the disease.

The multiplication of techniques and their elaboration tend more and more to convert doctors into technicians. It becomes necessary to insist that the main stem of the tree of medicine is the study of the patient as a complete human being, with mind as well as body, and in relation to the whole of his environment. The specialties and techniques may be likened to the branches, which, though necessary for the full growth and development of the tree, can retain their own vitality only in so far as they remain in unity with the main stem. The branches cannot function if the trunk decays; nor indeed can the roots, which may in this metaphor represent specialized research.

Out of these considerations arises the fear that the growth of specialist practice may endanger the integral character of medicine as a profession; and it is certain that if that character is impaired, so also will the usefulness of medicine to mankind be impaired, notwithstanding the technical skill of its specialist offshoots. The achievements of specialization are well known and well understood. To preserve the true balance of the profession of medicine greater attention must be paid to medicine as an integral whole as distinct from specialization and techniques.

As gevolg van hierdie beskouings loop die gedagtegang van die professie in twee rigtings—die opleiding van mediese studente en die funksies en status van die algemene praktisyn.

Met betrekking tot laasgenoemde behoort die algemene praktisyn, in samewerking met ander praktisyns van algemene geneeskunde, die fondament en steunpilaar van die geneeskunde te wees. By hom berus die prestige en doeltreffendheid van geneeskunde. Derhalwe word met verontrusting aanskou hoe die neiging ontwikkel om die algemene praktisyn op 'n laer peil as die spesialis te plaas. Ons besef dat dit verkeerd is; nietemin moet dit erken word dat die organisasie van mediese skole en die professie geneig is om die knap student, asook dié wat die meeste na roem en beloning strewe, in die rigting van spesialisasie te stuur. Ons besef ook dat die neiging onder die publiek steeds toeneem om spesialiste direk te raadpleeg en om nie op hul huisdokters staat te maak nie om hul aan te raai wanneer die spesialis ingeroep moet word. 'n Probleem van die allergrootste belang is hoe om die doeltreffendheid en prestige van algemene praktyk die beste te handhaaf en te verhoog, beide in plekke waar die samewerking van spesialiste gereedelik verkry kan word en in meer afgeleë streke waar dit nie moontlik is nie. Die onderwerp het al heelwat bespreking uitgelok maar 'n oplossing is nog geensins duidelik nie.

In verband met die opleiding van mediese studente versterk die mening dat meer aandag gegee moet word aan die praktyk en grondbeginsels van geneeskunde en minder aan gespesialiseerde tegnieke. Dit is ook die sienswyse van baie dat die kursus vir die baccalaureusgraad in 'genees- en snykunde' meer spesifiek op universitêre dissipline en minder op vakopleiding toegespits moet word. Daar is gewis sekere tegniese onderrig wat 'n essensiële deel van die basiese opleiding is maar van groter belang is die integrasie van tegnieke in die wyer omvang van die geneeskunde en die inprenting van die begrip dat die geneeskundige professie van die res van die mensdom afgesonder is deur 'n verpligting om die mensdom te dien—'n toewyding', en dat die beroep geensins beskou moet word nie louter as 'n bron om 'n bestaan te maak of om rykdom op te gaar. Die verskil tussen 'n professie en 'n amp of besigheid berus miskien by hierdie stelling.

Die baccalaureusgraad bekroon die eerste stap in die skepping van die geneesheer. Sy mediese loopbaan strek nou voor hom uit en die tegniese kennis wat hy miskien deur die breër opvatting van voorgaande opleiding verloor het kan vergoed word deur nagraadse studie en praktyk. Die veld wat hy prysgegee het sal van minder belang wees in vergelyking met die groot terrein wat hy gedurende sy loopbaan as geneesheer moet dek. Want as toegewyde geneesheer—of as huisdokter of as spesialis—kan hy alleen aan die eise van sy beroep voldoen as hy end-uit student bly.

VERWYSING

Mallick, S. M. K. (1953): *Medicine—A Technology or a Profession*, Brit. Med. J., 2, 461 (29 Augustus 1953).

These considerations have particularly turned the attention of the profession in two directions, viz. the training of medical students, and the functions and status of the general practitioner.

As regards the latter, the general practitioner in co-operation with other practitioners of general medicine should constitute the foundation and central column of medicine. On him depend its prestige and efficiency. Great uneasiness is therefore caused by the growing tendency to regard the general practitioner as of lower status than the specialist. We know that this is a false idea; nevertheless it must be recognized that the organization of the medical schools and the profession does tend to direct the abler students and those most ambitious for renown and reward into the channels of specialization. We know too that there is a growing tendency on the part of the public to approach specialists direct instead of relying on the general practitioner to advise them when the help of a specialist is needed. How the efficiency and prestige of general practice can best be preserved and increased, both in centres where the co-operation of specialists is readily available and in remoter places where it is not, is a problem of first-rate importance. Much has been said on the subject, but the solution is by no means clear.

As to the training of medical students, there is a growing feeling that more of the time available should be devoted to the basic principles and practice necessary for all practitioners, and less time to specialized techniques. Many also are of opinion that the course leading to the bachelor degree in 'medicine and surgery' should be designed more specifically as a university discipline and less as a vocational training. A certain irreducible amount of technical instruction is a necessary part of the basic training, but more important are the integration of techniques into the broader aspects of medicine and the inculcation of the idea that the profession of medicine is marked out from the rest of mankind by an obligation to render service, a 'devotion,' and is by no means to be regarded merely as a way of earning a living or accumulating wealth. Herein perhaps lies the difference between a profession and a trade or business.

The bachelor degree is the completion of the first stage in the making of the doctor. On his graduation his medical life lies before him, and the losses that may be associated with the broader conception of undergraduate training can be made up in post-graduate study and practice. The ground lost will be of little account in comparison with the broad fields to be covered during his life as a practitioner. For whether his life is to be devoted to general or to specialized practice it must be one of continual study if the obligations of his profession are to be fulfilled.

REFERENCE

Mallick, S. M. K. (1953): *Medicine—A Technology or a Profession*, Brit. Med. J., 2, 461 (29 August 1953).

ANTIGENIC COMPARISON OF INFLUENZA VIRUS STRAINS ISOLATED IN CAPE TOWN DURING 1952

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During the winter of 1952 influenza was widespread in the Union of South Africa. In the Cape Peninsula the incidence was high and cases of greater severity than those occurring during the 1950 epidemic were reported.

One institution which had been affected during the 1950 epidemic again suffered, and offered an opportunity of observing the incidence and severity of the disease. In one ward occupied by 111 ambulant patients 53 cases of influenza occurred. Several were complicated by pneumonia but all except one fatal case responded to sulphonamide and antibiotic therapy. The fatal case was a 32-year-old schizophrenic who became ill on 7 June, 1952. He was cyanosed the same evening and died about 8 hours after the onset of his symptoms. At autopsy an unsuspected mitral stenosis was found. There was marked congestion of the lungs, and from them virus was isolated.

A high incidence of influenza was also reported from several schools and prisons. The virus strains isolated from the different institutional outbreaks were used for this study.

MATERIAL AND METHODS

Virus Strains. Garglings were obtained from patients during the first 2 days of illness. From the majority of them virus was isolated in eggs inoculated amniotically, and in a few cases by intranasal inoculation of ferrets. Each strain was adapted to the allantoic cavity by 2 or 3 passages and then stored in the frozen (-70°C) or dry state until required for antigenic studies.

Two 1950 Cape Town A strains were included for comparison. One of these (A Cape Town 10/50) was of the 'S' variety described by Andrewes and Isaacs (1951), and the other (A/Cape Town 9/50) was an 'L' variant. All the locally isolated strains which were used in this investigation had been maintained in eggs only and can be assumed to have undergone a minimum of antigenic alteration since their isolation. The classical strains WS, Lep and Lee (B) were included for comparison. Their previous laboratory history is unknown to us.

Ferret Sera. Ferrets were given single intranasal inocula of virus in allantoic fluid or emulsion of turbinates from influenza infected ferrets. They were bled from the heart 10-14 days after inoculation. The sera, after separation from the clots, were stored at -20°C . After inoculation the ferrets were kept in separate cubicles to avoid cross infection.

Mouse Sera. Allantoic fluid from virus infected eggs was given intranasally in 0.05 to 0.1 ml. dose to groups of 50-100 mice. In the case of recently isolated strains undiluted allantoic fluid was used as inoculum. With

WS and Lee strains, however, preliminary titrations were carried out and that dilution of allantoic fluid used which gave less than 50% mortality.

Mice were bled from the heart 10-14 days after inoculation. The pooled blood from each group was allowed to clot and the serum separated after standing 18-24 hours at room temperature. The sera were stored at -20°C until required.

R.D.E. A dried V. cholera filtrate prepared and purified according to the method described by Burnet and Stone (1947) was used. It was titrated and used in haemagglutination inhibition (H.A.I.) tests according to the method described by Bozzo (1952).

Haemagglutination (H.A.) Tests. These were carried out according to the standard method recommended by the World Influenza Centre at the International Influenza Conference, 1949. Antigens consisted of virus in allantoic fluid with 30% of added glycerol. They were stored at refrigerator temperature ($0-4^{\circ}\text{C}$).

Complement Fixation Tests. The technique employed was essentially that of Fulton and Dumbell (1949). Antigens were prepared from the allantoic fluids of virus infected eggs. To obtain adequate virus contents the eggs infected with B strains required incubation for 3 days whilst for all others a 2-day period of incubation was more satisfactory.

Virus suspensions were concentrated by adsorption on the red blood corpuscles of the chick embryos, and subsequent elution into M/33 phosphate saline buffer (Dawson and Elford, 1949) in one-tenth the volume of the original allantoic fluid. In the case of B strains sufficient concentration of virus was sometimes not obtained by simple adsorption and elution. In these cases further concentration was achieved by ultracentrifugation. The concentrated virus suspensions were titrated for haemagglutinin and stored at -70°C until required. The H.A. titres obtained varied from 2,000 to 16,000.

The antigens were standardized for quantitative complement fixation tests by Fulton and Dumbell's method. For each the concentrations were determined which would, in the presence of a 1 in 2 dilution of homologous serum, fix 12 units (mouse serum) or 15 units (ferret serum) of complement.

Complement. Fresh guinea-pig serum was used. Great difficulty was encountered in obtaining complement of satisfactory titre. Particularly during the hot weather it was found essential to keep the complement dilutions in ice and to place each sheet in the ice box immediately after it was set out. Only by very careful attention to such

detail was it possible to obtain complement of satisfactory potency, but even then we did not achieve the titres reported by Fulton and Dumbell.

The modifications of Fulton and Dumbell's method which we have adopted include the use of slightly smaller perspex sheets and the substitution of 2% sheep cells for the 0.2% suspension recommended. We have also found it necessary to alter the method of correcting for 'non-significant' fixation; because under the conditions of our experiments the amount of complement fixed by the different antigens in the presence of normal mouse serum varied. With the locally isolated strains particularly, the amount of fixation with normal serum was significantly greater than that found by Fulton and Dumbell with classical strains. The amount of complement in log 10 units fixed by the standard amount of each antigen in the presence of normal mouse serum was plotted in the same way as for the final tests with immune sera. The area of the graph so obtained gave the correction value for each antigen.

RESULTS

The results of H.A.I. tests with ferret sera supplied by the World Influenza Centre and a variety of influenza strains are recorded in Table I. It is apparent that all freshly isolated (1952) strains were of type A (A prime).

Although no data are recorded here, H.A.I. tests were carried out with acute and convalescent sera of patients. In several the immunological response was poor. However no evidence was obtained of the occurrence of the 'S' variety of virus during the epidemic.

The results of H.A.I. tests with sera from ferrets which had been infected intranasally with virus in allantoic fluid are recorded in Table II. All the sera had been treated

TABLE I. RESULTS OF H.A.I. TESTS WITH FERRET SERA FROM THE WORLD INFLUENZA CENTRE

Antigens	Antisera to		
	PR8 (A)	Lee (B)	FM1 (A Prime)
Lee	<32	256	<32
Lep	<32	<32	128
A/Cape Town/1/52	32	<32	128
A/Cape Town/2/52	32	32	128
A/Cape Town/3/52	32	<32	128
A/Cape Town/4/52	32	32	128
A/Cape Town/5/52	32	32	128
A/Cape Town/6/52	32	<32	256
A/Cape Town/9/50	32	<32	128
A/Cape Town/10/50	<32	<32	128

The figures are the reciprocals of the highest serum dilutions causing inhibition of haemagglutination by 4 AD of virus.

with RDE before the tests were carried out. Several of the sera taken before infection contained H.A. inhibitors in spite of RDE treatment. One such serum was tested by complement fixation and shown to contain complement fixing antibody for A prime virus. The ferrets concerned had been sent to us by rail from another laboratory, and although each animal was kept in strict isolation after experimental infection, previous natural infection with the epidemic virus strain could not be excluded. The results obtained with ferret sera are therefore of limited interest and greater reliance has been placed on antigenic studies carried out with subsequently prepared mouse sera. It is however of interest that the strain A/Cape Town/10/50 which has been identified as an 'S' variant, and which is as anticipated poorly neutralized by all A

TABLE II. RESULTS OF H.A.I. TESTS WITH RDE-TREATED FERRET IMMUNE SERA

Antigens	Ferret Sera											
	Lee		Lep		A CT 1/52		A CT 2/52		A CT 3/52		A CT 4/52	
	N	C	N	C	N	C	N	C	N	C	N	C
WS ..	<10		<10		<10		<10		<10		<10	
Lee ..	<10	640	<10	10	<10		<10	<10	<10	10	<10	<10
Lep ..	<10	<10	160	80	20	<10	40	10	40	<10	20	10
A CT 1/52	<10	20	160	320	640	10	640	10	640	<10	320	10
A CT 2/52	<10	40	160	320	640	10	640	20	640	<10	320	20
A CT 3/52	<10	40	160	160	640	10	320	20	320	<10	640	10
A CT 4/52	<10	20	160	320	640	10	640	20	640	<10	640	20
A CT 5/52	<10	40	160	320	640	10	640	20	640	<10	640	10
A CT 6/52	<10	40	80	320	320	<10	640	10	320	<10	320	10
A CT 9/50	<10	20	80	320	640	<10	320	10	640	<10	320	10
A CT 10/50	<10	10	40	40	20	<10	20	<10	10	<10	20	10

Figures are the reciprocals of the highest dilution giving inhibition of haemagglutination by 4 AD of virus.
N = Normal serum (taken before infection).
C = Convalescent serum.

prime antisera, also appears less active in stimulating H.A.I. antibody. The serum from a ferret infected with this strain shows poor H.A.I. activity for all strains tested, although subsequent tests showed it to contain complement fixing antibody in amounts comparable to those in other convalescent ferret sera. The results also show a difference between a classical A prime strain (Lep) and the locally isolated strains. This difference was not as obvious in complement fixation tests subsequently performed with the same sera, nor on repetition with four freshly prepared sera.

In Table III the results of all complement fixation tests with ferret sera are summarized. No allowance has been

with mouse immune sera. Our results, some examples, of which are recorded in Figs. 1 and 2, show that the amount of fixation of complement in the presence of normal mouse serum differs for different antigens. Particularly marked 'non-significant' fixation has been observed in the case of some Cape Town A strains. It would appear to be desirable in the light of these results to make appropriate corrections for the different amounts of non-significant fixation, in the final calculation of antigenic relationship. No allowance could however conveniently be made for such non-specific fixation in the initial standardization of the antigen for use in the tests. We have therefore deduced the antigenic relationship between

TABLE III. RESULTS OF QUANTITATIVE COMPLEMENT FIXATION TESTS WITH FERRET IMMUNE SERA

Antigens	Antisera					
	Lep	A CT 10/50	A CT 9/50	A CT 6/52	A CT 5/52	A CT 2/52
Lep	1	·84	1·01	·70	·68	·74
A CT 10/50	·95	1	·80	·61	·87	·87
A CT 9/50	·99	·80	1	1·1	1·12	1·13
A CT 6/52	·84	·75	·88	1	·99	·91
A CT 5/52	·93	—	·92	—	1	1·15
A CT 2/52	·93	—	·89	·81	1·17	1

The amount of fixation with homologous antigen is expressed as 1·0.

made for non-significant fixation as in the case of mouse sera. The results are however in general agreement with those subsequently obtained with mouse sera, and show the similarity between the 1950 and 1952 A prime strains. The distinction between Lep and other A prime strains brought out in H.A.I. tests appears much less striking in the complement fixation results.

A more comprehensive investigation has been made

strains by comparison of the total 'areas' of fixation, as is recommended by Fulton and Dumbell, and have disregarded only those in which specific fixation is equal to or less than the fixation by the same antigen in the presence of normal mouse serum.

The results which are recorded in Table IV confirm the results obtained with ferret sera in showing a similarity between Cape Town 1950 and 1952 strains as well as

TABLE IV. RESULTS OF QUANTITATIVE COMPLEMENT FIXATION TESTS (FULTON AND DUMBELL) WITH MOUSE IMMUNE SERA

Antigens	Antisera							
	Lec	Davis	WS	Lep	A CT 10/50	A CT 9/50	A CT 2/52	A CT 6/52
Lec	1·0	·94	0	0	0	0	0	0
Davis	·96	1·0	—	—	—	—	—	—
WS	0	0	1·0	·79	·43	·59	·69	·73
Lep	0	0	·57	1·0	·93	·72	·93	1·02
A CT 10/50	0	0	0*	·78	1·0	·74	·96	·82
A CT 9/50	0	0	·62	1·05	1·02	1·0	1·01	1·03
A CT 2/52	0	0	·70	·94	·84	·95	1·0	1·18
A CT 6/52	0	0	·53	1·02	—	·97	1·02	1·0

The amount of fixation with homologous antigen is expressed as 1·0.
 — = Test not done. * = See text.

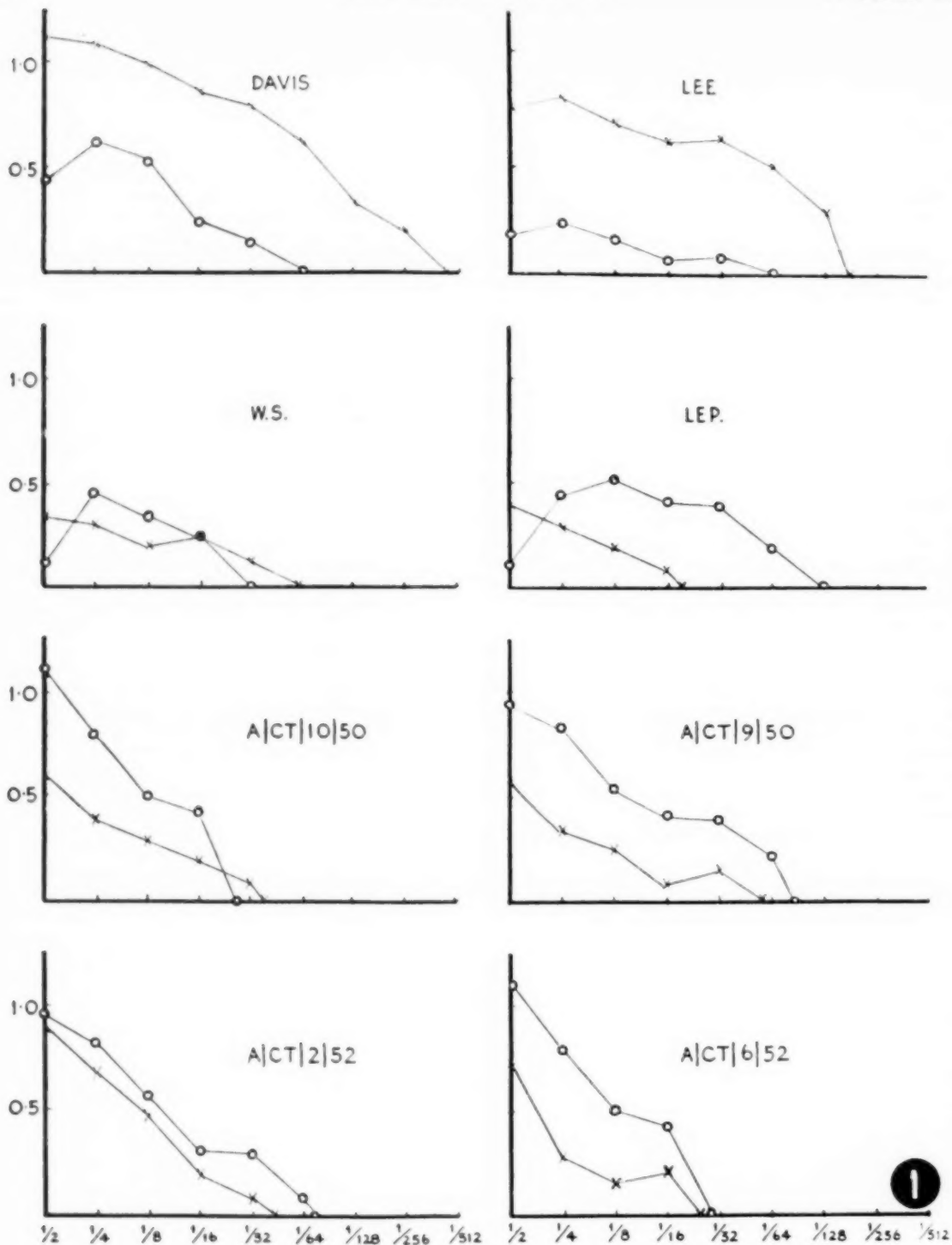


Fig. 1: Fixation of complement in the presence of normal mouse serum and Davis immune mouse serum by different antigens.
 ○—○ = Fixation in the presence of normal mouse serum ('non-significant fixation').
 x—x = Fixation in the presence of Davis immune serum.
 Ordinates — Log units complement fixed.
 Abscissae — Serum dilutions

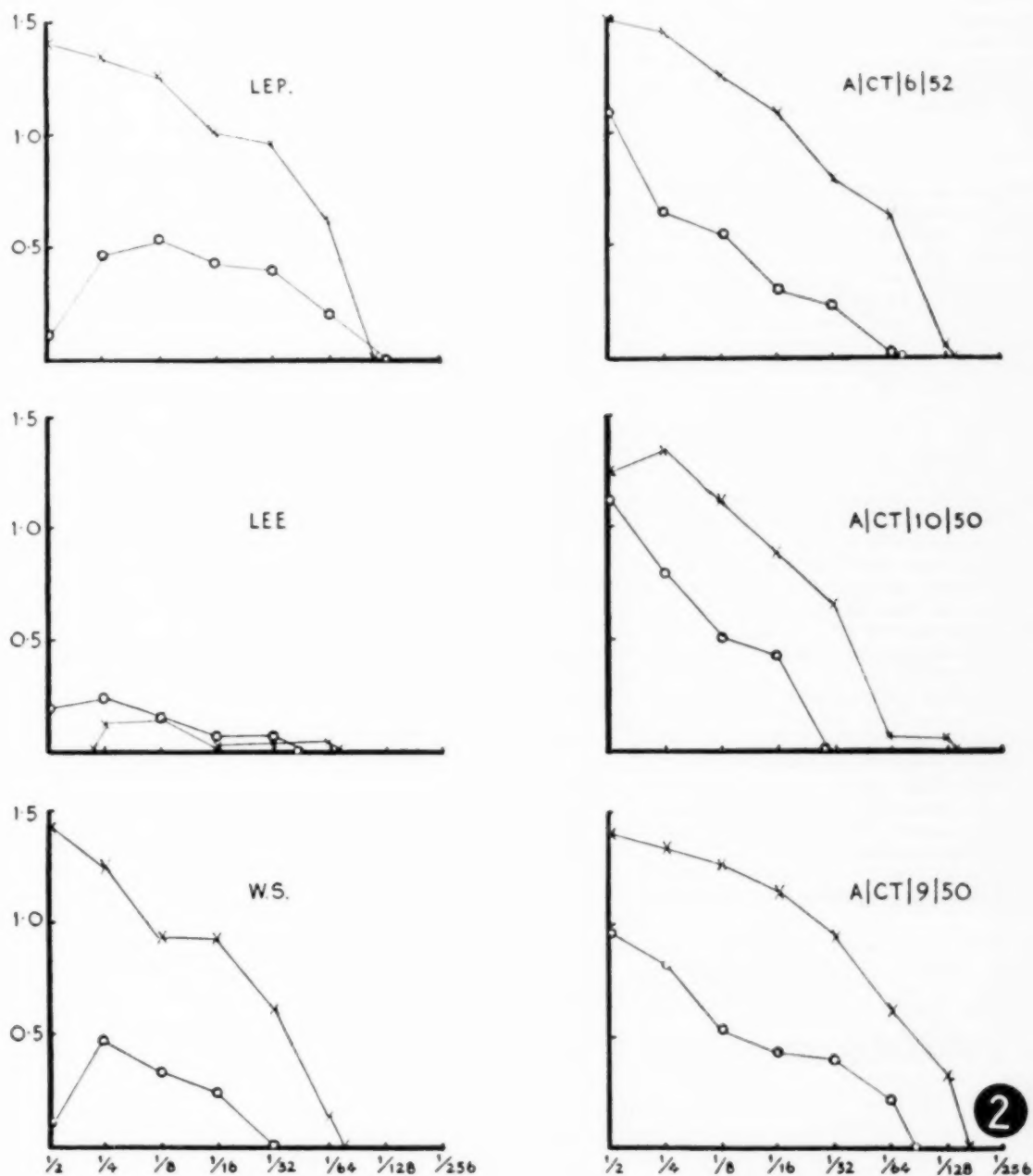


Fig. 2: Fixation of complement in the presence of normal mouse serum and 'Lep' immune mouse serum by different antigens.

o—o — Fixation in the presence of normal mouse serum ('non-significant fixation').

x—x — Fixation in the presence of 'Lep' immune serum.

Ordinates — Log units complement fixed.

Abscissae — Serum dilutions

a classical A prime Lep. The results include those obtained with two B strains, Lee and Davis. Whilst these are clearly differentiated from A strains they are much more closely related to one another than was anticipated from the results obtained by Bozzo in H.A.I. tests. We have since confirmed that Lee and Davis can be distinguished by H.A.I. tests even using the same sera with which the recorded complement fixation tests were carried out.

DISCUSSION

Whilst the quantitative complement fixation test employed, has proved entirely satisfactory in distinguishing between the major subdivisions of influenza viruses, it has not in our hands proved as sensitive in the determination of minor antigenic differences as anticipated from the results of Fulton and Dumbell. Thus two B strains, Lee and Davis, which were distinguishable by H.A.I. tests, appeared identical by complement fixation; also differences between the classical A strain WS on the one hand, and A prime strains on the other, though definite were not as marked as expected.

This may at least partly be due to the lesser sensitivity of the reagents, e.g. complement, at our disposal. It may well be that with a smaller overall amount of complement fixation in the presence of immune serum, 'non-significant' fixation becomes of sufficient relative magnitude to affect the accuracy of the test.

In fact at least one completely erroneous result (marked * in Table IV) probably depends on the unusually large correction for 'non-significant' fixation. Furthermore the different amounts of complement fixed by the different antigens in the presence of normal mouse serum will introduce errors which cannot be corrected by simple calculation. It would seem desirable to allow for non-significant fixation in the initial standardization of antigens so that only specific fixation need be considered in the final comparative tests between strains.

In spite of this disadvantage and technical difficulties which we experienced initially the method has proved satisfactory in the antigenic identification of our influenza strains, including some which could not have been identified by H.A.I. tests (e.g. A/Cape Town/10/50). All proved to be type A antigenically identical to the A prime strains

isolated in 1950, but differing from them in being all of the 'L' variety.

It is of some interest that the epidemic in 1952 was again fairly widespread and involved several of the institutions in which severe epidemics had occurred in 1950.

The discrepancy between our results obtained in complement fixation and H.A.I. tests with Lee and Davis strains requires further detailed investigation. The differences between them as judged from H.A.I. tests may depend not only on antigenic differences but also differences analogous to those between the 'S' and 'L' variants of A prime virus.

It is of interest that in our investigations the ferrets infected with an A prime 'S' variant appeared to produce less antibody even against the 'L' variety as determined by H.A.I. tests, whilst the serum proved in complement fixation to contain antibody in amounts comparable to that evoked by other A prime viruses.

It would appear therefore that the exact antigenic identification of new strains must depend both on H.A.I. and complement fixation tests.

SUMMARY

Complement fixation and H.A.I. tests have been applied to the study of influenza virus strains isolated in Cape Town during 1952. All proved to be of the A prime variety.

Difficulties encountered with the quantitative complement fixation tests are discussed.

Discrepancies are pointed out between results of H.A.I. and complement fixation tests.

We would like to thank the Medical Superintendent (Dr. Gordon Key) and Dr. F. O. Fehrsen, of Valkenberg Hospital, for facilities given us, and also the authorities of the Bellville jail.

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TUBERCULOSIS IN EAST LONDON

WITH PARTICULAR REFERENCE TO THE SANTA TUBERCULOSIS SETTLEMENT, FORT GREY, AND ITS RELATION TO TUBERCULOSIS CONTROL

JOHN SAVILLE LEWIS, M.B., Ch.B., D.P.H.

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Now that the South African-wide appeal for tuberculosis funds has closed and the country is in the happier position of deciding how the money collected is best spent, I should like to put forward the following ideas to provoke discussion and help crystallize the thoughts of those who are engaged in the establishment of settlement projects.

To begin with I will describe the tuberculosis problem in East London—a parochial outlook perhaps, but the description of our activities, difficulties and possible mistakes provide my material. In Table I are the relevant municipal statistics of East London for the years 1946–1953:

TABLE I: EAST LONDON MUNICIPAL STATISTICS FOR THE YEARS 1946-1953

Population 1952 Census	Crude Death Rate per 100,000 Year Ended 30 June 1952	Annual Tuberculosis Death Rate per 100,000 (ended 30 June)								Municipal Tuberculosis Beds Available
		1946	1947	1948	1949	1950	1951	1952	1953	
European .. 43,780	1,021	34	49	48	53	35	39	27	18	30
Coloured .. 5,877	2,552	844	884	817	775	949	786	800	298	
Asiatic .. 1,593	1,193	244	163	152	146	143	278	126	61	59
African .. 40,457	3,196	728	719	666	765	899	779	470	374	
All Races .. 91,707	2,082	375	381	351	391	447	393	274	194	89

Of our tuberculosis notifications almost half were of cases coming from peri-urban, Ciskeian and Transkeian areas. Our Native location clinics and the private medical facilities of East London cause a large influx from the country. In 1950 people from the country were adopting all manner of ruses to claim domicile in order to qualify for admission to the municipal tuberculosis hospital: dying cases were being abandoned by friends and relatives in the location streets and in the hospital out-patient department. The harassed medical officers in charge of the hospital were forced to admit these neglected advanced cases. The admission of cases depended more on expediency and compliance with outside pressure groups than on hard-headed selection from waiting lists. We were serving a humanitarian need but hospital curative work was at a low ebb. Modern drugs have since helped to alter this position materially.

While our 30 European tuberculosis beds were almost adequate, for we were able to treat the balance of Europeans satisfactorily as out-patients, the 59 non-European beds were hopelessly inadequate. The public, medical practitioners and local authorities desperately sought immediate relief, mostly in the direction of additional hospital accommodation.

The primary causes of our high tuberculosis mortality seem obviously to spring from the very low standard of living of our Africans, Coloured and poorer Europeans. There are: dire poverty, low standard of education, low productivity of labour, faulty dietary habits, excessive reproduction, concomitant diseases, insanitary home environs, grossly insufficient housing. Among the Africans we find out-moded tradition, disintegration of family life, gross overcrowding. Our average city and rural African more likely than not sleeps with 5 to 10 others crowded for warmth in a poorly-constructed and badly-ventilated room or hut. For the Coloured especially are the temptations of alcoholism, and the drain of hire purchase of furniture for their sub-economic houses and premiums for burial insurance.

The industrial revolution which is greatly responsible for present slum conditions will eventually, we hope, bring that greatly-needed general prosperity which will cause these things to pass. It has been aptly stated that we must divest our lower classes of their tattered clothes.

In view of the foregoing facts the provision of more money on the building and maintenance of hospitals than was being made available for improvement of housing

and communal facilities seemed pointless. We could not possibly apply the old formula of one hospital bed per tuberculosis death per annum to this tuberculosis epidemic. Successful drug therapy was just beginning and we could not foretell its effect in lowering tuberculosis incidence. If we did build a large hospital it would have to conform to standard patterns so that it could later be converted to ordinary medical usage were the tuberculosis need to fall away. Our cheapest plans for a 200-bed hospital extension as proposed in 1950 would by using existing facilities have cost £350 a bed fully equipped but they were rejected on financial and technical grounds.

How then with the limited financial resources at our disposal could we obtain some semblance of order out of chaos? We were left with the decision that we must work with a small core of conventional hospital beds, which we decided should be reserved for cases in need of active hospital nursing care, viz. (a) seriously ill and advanced cases, and (b) cases needing active curative therapy.

The balance of ambulant cases (those capable of walking about and fending for themselves without undue discomfort!) would have to stay at home and be treated as out-patients or be admitted to a settlement. Segregation and treatment at home of the infectious case was made difficult by the gross overcrowding, administrative difficulties of home ownership, and insufficient control of the influx of infected Africans, especially from neighbouring territories.

A careful check of 250 African cases on our 1950 waiting list revealed that at least 75% of them were for practical purposes too extensively affected for 'cure' and would probably, if they survived for any long period, fall into the infectious chronic fibrocavitary class. Modern drugs have already succeeded in keeping many cases relatively non-infectious and sputum-free for indefinite periods. Isonicotinic acid hydrazide has been freely used in our out-patient therapy with many 'cures' on this drug alone. Para-amino-salicylic acid and streptomycin have also played their part in out-patient therapy.

For the infectious, irresponsible unco-operative patient who remains so in spite of all our help and persuasion (a small group, often under the influence of various religious beliefs, but responsible for much spread) we have no answer but treatment on the lines of present leprosy control.

ESTABLISHMENT OF SETTLEMENT

Early in 1950 the East London public eagerly collected £18,000 for the establishment of a tuberculosis settlement at Fort Grey—a 300-acre area of undeveloped forestry land overlooking the sea 3 miles inland and 7 miles from the centre of the city. This magnificent Crown grant of forestry land to the East London Branch of the South African Tuberculosis Association (SANTA) seemed ideal for the purpose. Patients would be able to indulge in open-air farming pursuits; also we were in no way restricted in planning of lay-out and could use untrained labour for building. The land would revert to the Crown if no longer used for the original purpose of tuberculosis work.

At this stage it was expected that the settlement would cater for all sections of the community—for all types of tuberculosis in children and adults, and for selected families who would work on the settlement and contribute part of their welfare grants for their maintenance. It was hoped that in time the activities of the settlement would tend to make it almost self-supporting—a forlorn ideal perhaps but one for which it was worth striving. By its remoteness from the city the site presented the difficulties of new township development, such as lack of access roads, transport, water supply, electricity and sewerage mains. We have been fortunate in obtaining municipal water piped from a distance and an access road serviced by the Divisional Council, and we shall later have Escom electricity. Several pit-latrines and Rhodesian aqua-prives have been installed. The kitchen and bathroom slop-water is presenting a problem owing to the poor porosity of the soil. (Underground waters are brack and reported to be unsuitable for irrigation). House washbasins are being provided without drains in order that the water shall be distributed on the gardens.

In 1950 a Director (non-medical) was appointed to the settlement. With the aid of Native labour he built his own family house and 4 garage-storerooms. By 1951 50 non-European tuberculosis beds were made available at a total capital cost of £8,083. At the time of writing (August 1953) we shall soon have 180 beds at a total capital cost of £18,000. The maintenance cost of the settlement is 7s. 6d. per patient per day, which figure also covers the wages paid to patients for their labour.

We have now adopted the SANTA house plan, with partial internal walls. Each house costs approximately £335 to build, and accommodates 10 patients. It is convertible by the addition of certain internal walls and doors to a two-bedroom family house. A new dining-hall, kitchen, ablution block and workshop are in process of completion.

At present we restrict admissions to non-European active infectious cases, because of the urgent need and because the Union Government subsidy is restricted to infectious cases not in need of active nursing care.

Two non-European trained nurses will at this stage probably be employed to assist the Director to carry out minor procedures such as dressings and streptomycin injections (thus reducing expenditure on transport to hospitals and clinics) and to hand out drugs prescribed. Nursing will be cut to the absolute minimum. All cases developing

serious illness, excessively debilitated, or needing active nursing or pneumoperitoneum induction, are re-admitted to the Municipal Hospital and replaced by cases on the hospital or out-patient waiting list. Patients who resisted admission to the settlement initially are mostly only too pleased to return there.

Present-day drugs are casting some doubt on the rôle of absolute rest in the treatment of pulmonary tuberculosis, for many cases treated at settlement or at home as out-patients have done as well as those in hospital.

The additional accommodation provided has been proved a boon to the municipal tuberculosis service. There is a greater turnover of patients by the Municipal Hospital, which is serving an improved curative rôle, thus enabling SANTA Settlement to do more convalescent rehabilitation work. We are at last able to cope with appeals for admission of destitute cases. There are at present too few hospital beds, tending to make us press for nursing care at the settlement, which is regretted.

The East London Municipality provides all drugs, ambulance service and medical officers, which to some extent obscures the true patient-day cost of SANTA Settlement.

The settlement is controlled by a SANTA executive committee, on which there are serving at present 2 municipal medical officers, a Union Health Department representative and the Chairman of the East London Municipal Council and the Divisional Council, which arrangement ensures co-operation with the local authorities. The other members of this very active committee are elected at the annual general meeting. An action sub-committee advises the main committee on the progress of the settlement at monthly meetings, when the director's monthly report is also submitted.

FUNCTIONS OF A TUBERCULOSIS SETTLEMENT

There is much diversity of opinion about the functions of tuberculosis settlements, but for the sake of brevity I enumerate what appear to be the main functions in order of importance.

1. *Full Rehabilitation.* Under this heading I include the following:

Treatment and cure of tuberculosis cases.

Adequate control of the period of convalescence.

Sheltering the patient, after his inactivity and freedom from responsibility in hospital, from the hazards of too early and precipitate a return to the economic, physical and mental struggles of civilian life.

To prevent a return to conditions which originally contributed to the onset of tuberculosis.

To accommodate the patient (and his or her family if necessary) and to teach them the elements of hygiene and good living.

To teach the patient (and family if necessary) more suitable trades and occupations.

To encourage an attitude of self-help.

To spread this knowledge among his fellows.

Lastly to give help through active service on care committees in his own area after discharge from the settlement.

These are ideals it is true but they are worth striving for.

2. *Partial Rehabilitation.* For the ambulant chronic infectious case, who, although he may yet recover sufficiently to return to civilian life, too often spends the rest of his days in hospital, there is partial rehabilitation. Settlement offers a happier outlook of gainful occupation



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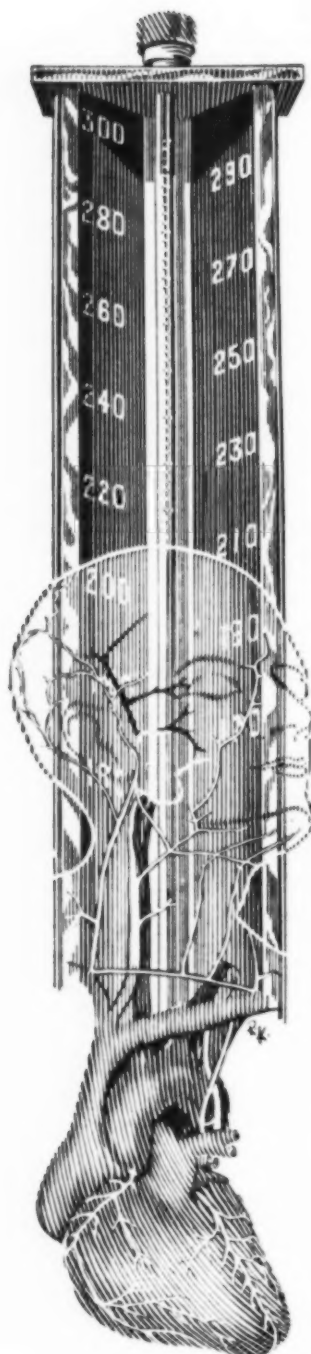
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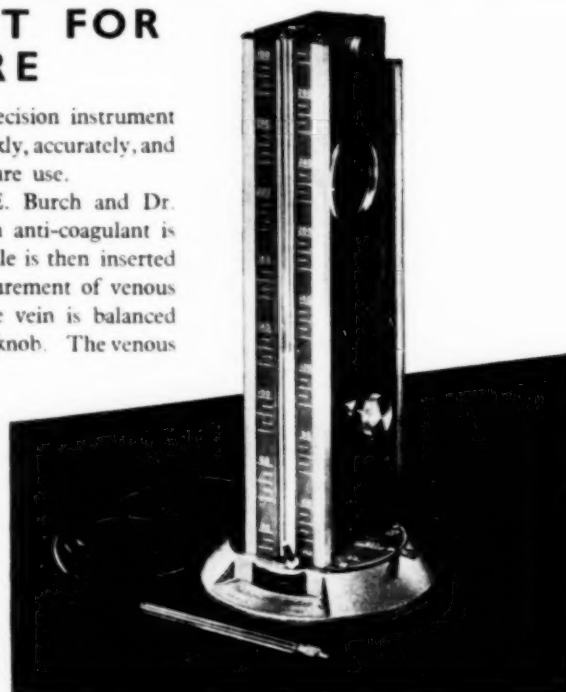
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and employment, a relatively useful communal life without the excessive restrictions of full hospital routine, which too often develops a state of morbid introspection and excessive dependence on nursing staff. For these people self-help is a tonic.

It is surprising how with the aid of modern drug therapy selected advanced cases have taken to settlement life. One man, who was a bricklayer by trade, received hospital treatment for a severe tuberculous laryngitis and loss of both upper lobes by cavitation. On discharge to the settlement he was for a period on his own initiative laying 500 bricks a day. He now helps to supervise building operations. I have noticed no deterioration in his condition attributable to this activity. He is certainly a happier man.

3. To provide cheap segregation of the infectious case in a form acceptable to the patient on a voluntary basis.

4. To augment tuberculosis hospital beds by providing beds at a lower capital cost than is possible at a conventional hospital built by artisan labour.

SANTA Care Committees. This important activity of SANTA must be mentioned for the sake of completeness. Volunteers of our various racial groups and areas serve on these care committees, whose basic function is the care and welfare of tuberculosis sufferers and their dependants and general interest in the improvement of their living conditions. Acting in liaison with the municipal tuberculosis clinics and tuberculosis health visitors, the Social Welfare Officer and medical practitioners, they grant relief to needy families in the form of home nursing, food parcels, rent and clothing. This has saved many a family from starvation, prevented parental neglect, and enabled many a child with a tuberculous primary complex to overcome the infection.

Education and propaganda have resulted in a diagnosis of tuberculosis in many a case in which the patient has himself asked his doctor for a chest X-ray.

POSSIBLE DEFECTS OF THE PRESENT POSITION

An essential feature of good tuberculosis hospital practice, depending very much on the voluntary co-operation of the patient, is that the hospital and clinics should be as close and accessible to the community as possible. The community should learn how to live with tuberculosis, not how to run away from it. The best form of teaching is by example. How much more difficult we make this education of the public when we place a settlement far away from the community it serves!

The psychological effects of segregation of the infectious patient are much more intensified when he is separated from his family. He worries over his children, over financial difficulties at home, over the fidelity of his wife, etc. Alcoholics abscond from the settlement to return to their friendly bottle. Patients try to go home of a week-end and if they are refused too often or if the discipline is too harsh they abscond.

Once a family is placed in a settlement we disrupt its community associations and make it more difficult to return it to the community if the breadwinner dies. In the African this is an important point. Many African women take temporary husbands. Is it wise then to

entrench and regard as stable an African family unit when the man falls ill? Normally new attachments with male breadwinners would be made.

A city patient's family should be able to have access to normal urban avenues of employment if successful rehabilitation is to be achieved.

In a settlement we are really building a 'sub-economic' type of house, good of its kind, with a desirable lay-out, and provided with communal facilities to give it the identity of a settlement. Are we right in building a settlement in a place remote from the rest of the community? If the need for tuberculosis declines will not a settlement placed adjacent to the community it serves be easily convertible to the normal housing needs of that community? On the other hand should we not be able to extend the activities of the settlement to adjacent municipal housing? How much more stable our control of a tuberculosis sufferer would be if we controlled his home!

Would stigma be a problem? Under present conditions a family is more likely to reveal the case of tuberculosis in order to qualify for occupation of a pleasant home. There would be much less movement of the tuberculous from pillar to post. There are ways and means of enabling a tuberculosis family to occupy a modest municipal house on an economic basis. I venture to suggest that open tuberculous should not become ineligible for Government refunds to local authorities when they have been trained by a settlement in the art of hygienic living with the family and are controlled in normal housing units by the local authority.

The Temba Tuberculosis Settlement, Grahamstown, is adjacent to the location but falls outside the jurisdiction of the location authorities and will be an excellent proving ground for many of the ideas I have propounded. The FOSA Settlement, Durban, is located near the Indian community it serves and families are admitted.

SUMMARY

The tuberculosis problem of East London is described in relation to control measures and the establishment and functions of a tuberculosis settlement.

A plea is made for the establishment of settlements as close as possible to the community they serve, and if possible for the integration of settlement activities with the normal housing development of the area.

The importance of Care Committee work is stressed.

The solid achievements of the Tuberculosis Association and the SANTA Settlement in helping to reduce the tuberculosis mortality in East London are enumerated.

I wish to thank the Medical Officer of Health, East London, for permission to publish this article; and also to tender my thanks for their help to Dr. E. A. MacIldowie, President, East London Branch of SANTA, Sister E. Birch, tuberculosis health visitor, Matron D. Evatt of the Municipal Isolation Hospital, and Mr. D. Bettison, previously Social Welfare Officer, East London, and now Director of SANTA Settlement, Fort Grey.

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MORALE IN INDUSTRY*

JOSEPH B. LURIE

Medical Officer, Klipfontein Organic Products Corporation

Lord Montgomery¹ concluded his address on 'Morale in Battle', delivered to the Royal Society of Medicine (1946) with the following words: 'We live to-day in a scientific age. But we soldiers have to remember that the raw material with which we have to deal is "men". Man is still the first weapon of war. His training is the most important consideration in the fashioning of a fighting army. All modern science is directed towards his assistance, but on his efforts depends the outcome of battle. The morale of the soldier is the most important single factor in war.'

The soldier in time of war is but the employee in industry in times of peace and so it might equally well be said that the morale of the employee is the most important single factor in industry.

Section 51 of the Machinery and Building Works Act of 1941 states: 'All measures must be taken to secure safety and preservation of health, including sanitation, ventilation, lighting and heating in factories.' Cleanliness is stressed and clauses inserted relating to change rooms, protective clothing, washing facilities, rest-rooms, first-aid, fire precautions and welfare. Further regulations concern themselves with the maximum allowable concentrations of toxic substances in the atmosphere of workshops (more especially in chemical factories) beyond which the health of the worker may become impaired. More recently, posture in industry, more elaborate canteens, food and nutrition, accident rates and absenteeism, industrial psychology, and the rehabilitation of the injured workman, are subjects which have been receiving a good deal of attention by scientific industrial research workers. To what end are these scientific workers toiling so assiduously on such a multiplicity of subjects?

It may appear that the Factories Act concerns itself mainly with the environment, and so with the effect of the environment on the bodily or physical health of the worker. But the body cannot be divorced from the mind. As the body is ill or well so is the mind weary or alert and so is morale low or high. And it is to this end that scientific workers are labouring, for the behaviour of the individual (and the group) gives the key to a state of morale without which, it has been said, no war can be won, and no industrial organization survive.

Morale is an abstract condition. It is essentially a mental quality, the product of a mind and a conscience and, therefore, dependent on the human factor.

High morale does not just happen. It is a personal identification of the individual with the group, the factory and the organization, with home and family, and so, in its widest sense with the nation's destiny. That is why it is important.

Morale must be viewed from the angle of (a) the working environment and (b) the impact of that environment,

not only on the physical or bodily health of the worker, but, more important, on his mental outlook and behaviour. Events at home will have a bearing on the man's conduct at work, and conditions prevailing in his place of work will have a bearing not only on his bodily health, but on his behaviour towards his fellow-workers, his reaction to authority and his attitude to home and family.

THE WORKING ENVIRONMENT

Industrial hygiene denotes hygiene in all its aspects in relation to the factory, and 4 major fundamental conditions have come to be recognized as essential in a well organized and smoothly run factory. These are: (a) housekeeping, (b) lighting, (c) heating, (d) ventilation. A number of subsidiary conditions under the general heading of 'welfare', such as canteens, food, posture and noise, are important, for they go to form a balanced whole in relation to the 4 major conditions.

a. *Housekeeping.* Any self-respecting housewife can give a clear idea of what is implied by good housekeeping. It means, simply, cleanliness, orderliness and tidiness. The old Yorkshire saying, 'Where there's muck, there's money', does not apply to-day. Good housekeeping reduces accidents, lessens absenteeism, contributes to the efficiency of the worker and thus to greater production, and heightens morale.

b. *Lighting.* The ideal lighting is daylight. It is intense and diffuse, and in factories where artificial lighting becomes necessary efforts should be made to imitate daylight as closely as possible. This is most readily achieved by fluorescent lighting, which because of its diffuseness and intensity most closely approximates to daylight.

The effects of inadequate lighting on the health of the employees are eye-strain, headaches, insomnia, shortened temper and truculence, and it is inevitably accompanied by a reduced output, a rising sick-rate curve and a lowering of morale.

c. *Heating.* Heat loss is regulated physiologically by the amount of blood circulating through the skin and by the amount of moisture evaporating from the skin. To maintain a stability of output environmental conditions should be such that they help in regulating the body temperature. Such conditions give a feeling of comfort to the worker, whose efficiency and morale will remain at a high level.

d. *Ventilation.* The object of ventilation is to create an adequate change of clean, fresh air, for it must be appreciated that ventilation, temperature and humidity form a closely interwoven trinity each dependent on and reacting upon the other. They determine the health and comfort in a workshop and so will have a no less important bearing on the psychology than on the physiology of the individual. Defective ventilation increases the chances of infection from person to person; and of inhalation of noxious fumes, vapours and dusts; and further, inadequate ventilation will tend to produce anoxaemia, with the

* A paper read at the South African Medical Congress, Johannesburg, September, 1952.

consequent onset of fatigue, one of the most important factors concerned with a lowering of the morale state. This type of ventilation must not be confused with local exhaust ventilation drawing away toxic fumes and dusts from the contaminated atmosphere immediately surrounding the worker.

Welfare.

Welfare embraces a number of factors having the object of raising the morale of the worker. It should always be regarded as a means to this end. The Welfare Officer should be wary lest he allow his enthusiasm to cloud his vision and so come to regard welfare as an end in itself. No management is willing to dissipate its hard-earned profits in luxuries, but the wise management will readily supply necessities and be willing to consider favourably suggestions for improving the welfare of workers, providing such proposals help to raise the morale of the worker and strengthen the incentives for greater output.

Food and Nutrition.

Much has been written on the scientific study of the food a factory worker should receive in the canteen. But a canteen is not a hospital kitchen presided over by a qualified dietician. The factory worker is not ill. I venture to suggest that the factory worker 'looks younger and lives longer', not because he may have swallowed a few vitamin tablets of doubtful nutritional value, but because his wife has learned to prepare the food his mother used to give him. It is necessary of course that the food in the canteen should be wholesome, well-cooked and palatable. But a man goes to the factory to work and earn; he eats at home.

Posture.

Posture in industry is so wide a subject, embracing as it does orthopaedic, gynaecological and medical conditions, that it is only necessary here to draw attention to the work of Darcus¹ and his research on the human factors appertaining to operators of road transport vehicles and their importance in increasing the efficiency of drivers, thus reducing road accidents. His interesting observation that 'comfort cannot be obtained nor can fatigue be reduced in a seat designed without a sound knowledge of bodily dimensions' was confirmed in the original work on the adaptation of machines to airmen by Professor Le Gros Clark.² Such research has further had the effect of illuminating the position in connection with job placement, for if it is important to match the machine to the contours of a person, it must be equally important to match the job to the person mentally and psychologically most suited to it.

Noise.

The meaning generally applied to noise is a jarring on the ears causing irritation. Noise, however, may be irritating until one has become used to it, and then not noticed until noise of a different kind is heard. Noise in a factory is usually uniform and the worker, having got used to it, takes it for granted. The general noises heard in a workshop have, in the main, caused little inconvenience, and research workers have come to the conclusion that noise

has little effect on efficiency. By itself it does not cause morale to fall. Davis,³ quoting Dr. Karl Kryter, Director of the Human Resources Research Laboratory at Bolling Air Force Base, U.S.A., states: 'Experiments carried out with proper control of pertinent factors reveal that steady or expectant noises do not adversely affect psychomotor activity to any significant extent.'

Impact of the Environment on the Worker.

Morale, it has been said, is essentially a mental and moral quality, and therefore at root based on the character of the individual. Just as in an inspection of the environment certain physical and material defects move sharply into our line of vision, so in a study of the worker a number of characteristics, mannerisms and idiosyncrasies become clearly silhouetted against the background of his work. When, in 1914, war burst upon the world, there came with it an urge for production on a hitherto unprecedented scale. Men and women laboured in factories from 90 to 100 hours a week. The results, however, were disconcerting, for the accident and sickness rate increased, the absenteeism rate rose, and when the first rush of energy had spent itself output and production went down. A committee was therefore set up to study the health of the war worker, and it found that the core and kernel of the problem was fatigue.⁴ This committee formed the nucleus of what is now known as the Industrial Health Research Board in Great Britain, and between the two world wars this Board published 80 papers on industrial fatigue, length of working hours and maintenance of output, proving scientifically, and conclusively, that fatigue lowers output and adversely affects morale.

Fatigue.

Fatigue is a disturbed mental and emotional state, which shows itself in a loss of concentration causing imperfect timing. From the environmental angle inadequate ventilation is the most important single factor in inducing fatigue, other factors being faulty machine-design, which, in turn, may be responsible for faulty posture. From the angle of the individual, long hours of work, with little or no allowance for rest pauses, will cause complaints of which the signs and symptoms may appear to be remote from any connection with the fatigue state. A comparatively trivial illness, a cold or a bout of influenza, will not be shaken off easily. A person will complain of difficulty in getting off to sleep and when sleep does come it is disturbed by dreams with nightmare scenes of reprimands by higher officials and violent quarrels with other workmen. He will become irritable and jumpy; explosive outbursts will be common. Recurrent and increasing errors in his work cause him to fear the loss of his job, the worry of which only adds to his already fatigued state. He begins to resent discipline and becomes slovenly and untidy. At home he will be morose, moody and short-tempered. He will lose his appetite, suffer from indigestion and may even develop a gastric or duodenal ulcer. Morale is at its lowest ebb.

The Group.

In units, in factories, in communities and organizations, people tend to form groups so that each person, apart

from being an individual, becomes a member of a group. Groups develop personalities of their own. A group thinks and acts differently from the individual. This breeds incentive and strengthens principles. It influences behaviour and dictates action. It encourages the weak and inspires the strong. It supports its members against injustice. It backs them against other groups. It develops loyalties. It instils discipline into its various members and heightens morale. 'Workers' solidarity is one of the strongest motives in industry' (Raphael).¹

And finally, from within the group will emerge a leader, elected, as a rule unanimously, and it is queer how easily and naturally this is done, and how right the group is, as a rule, in its selection.

Leadership.

Leadership is perhaps the most important single factor in keeping morale at a high level. Both the late Lord Wavell and Lord Montgomery, writing on the mental and moral qualities of leaders, remarked: 'A leader must have character. He must have a genuine interest in humanity and a knowledge of men, the raw material of his trade.'

High morale in a factory usually starts at the top from the office of the managing director. It infiltrates and permeates through the various departments just as a stone dropped in a pool of water sends out ripples to the periphery. Personality and the willingness to take responsibility are the most important qualities in a good leader. Human beings are alike in that they show certain characteristics common to the herd. When danger threatens they tend to band together and look for guidance from a leader.

A leader must be intelligent. He must have the strength of character to make a decision and act on it, and the correctness of the decision is irrelevant. He must be able to convince others that the decision he has taken is right even though in his heart he is assailed by doubt. In times of crisis he must remain cool and imperturbable. He must be able to think rationally and act normally under abnormal conditions. He must have an imaginative insight to see beyond the obvious. He must be emotionally balanced and self-possessed. He must show prudence but he must also be bold and prepared to take risks. He must have a sense of justice. He must not attach importance to things most men find trivial, and, more important, he must not regard cynically those beliefs which the common opinion of mankind has held essential to its spiritual welfare. He must not be given to ridicule, and must be possessed of a sense of humour, which has been defined as the ability to laugh at ourselves. He must not brush aside lightly matters which the employee considers to be serious nor should he treat with contempt a complaint which the workers believe to be caused by conditions of work.

We are told that all great leaders have one constant attribute in common, a knowledge of men. Proof of this is strewn all through the pages of history, and since this knowledge plays such an important part in the make-up of leadership, the question might legitimately be asked why medical schools pay so little attention to the study of normal psychology. The answer may be found in the fact that an appreciation of normal psychology, or a knowledge of human nature, is not easily acquired by attending

lectures and reading medical books. The subject-matter taught there is abnormal psychology.

Three inherent qualities appear to be necessary for a man to gain some knowledge of his fellow men: keen observation, wide experience and a healthy imagination.

'An east-end pub in an east-end slum.

Is just an east-end pub to some;

To Masfield, something more.'

When observation, experience and a healthy imagination are developed to their highest degree in a person with an approach which appeals to a majority, and if these attributes are supported by an iron will and rigid determination, it is likely that a great leader will emerge.

Discipline.

Discipline is an essential factor in the maintenance of morale. Under army conditions discipline can be rigidly enforced. In industry a worker is at liberty to leave his work. The object of discipline in the army is the conquest of fear. The object of discipline in industry is to maintain and when necessary to increase production. But discipline also implies more than either of these conditions. It means the washing of hands before a meal, and after work a shower bath and a change into clean clothing. It implies a show of pride, clean living and self-respect.

Rumour.

It is logical to assume that morale is at its highest during periods of success and prosperity, but it would not be correct to say that the converse is true, that during a slump morale will be low. It depends on the strength of the organization. Experience proves, however, that during a period of depression morale is affected by rumour. Stories may begin to circulate that the organization is running at a loss, that officials in high positions do not agree about policy, that friction is rife and that some heads of departments are resigning. Confidence in leaders, therefore, begins to wane.

Rumour is incalculable. It acts insidiously, seeping into the consciousness of the group. No one knows how a rumour starts and nobody seems to be responsible. Even if it is false it may be difficult to correct. The best way to deal with rumour is to try to stop it at the start. The management should at once call a meeting of the staff, and, if necessary, address the workers also, explaining the true position, *truthfully*. To show that such a procedure is not entirely incorrect I quote from Mr. Winston Churchill's *Memoirs*.² 'It was necessary above all, to warn the House and the country of the misfortunes which impended upon us. There is no worse mistake in public leadership than to hold out false hopes soon to be swept away. People can face peril or misfortune with fortitude and buoyancy, but bitterly resent being deceived or finding those responsible for their affairs are themselves living in a fool's paradise.'

Finally morale in a factory will be raised when the worker is a member of a pension fund and medical benefit society, and knows that the medical organization is of such a quality that the injured workman will receive efficient medical aid immediately; that he will be adequately compensated for sickness or injury, and that the attitude of the management towards rehabilitation in its

widest sense is such that everything possible will be done to repair his injury so that he will be able to compete in the labour market once again.

In conclusion it can be said that a high state of morale will depend on the physical health and mental well-being of every single person in an organization, from the managing director to the most humble charge-hand. As we know industrial medicine has arrived, and the doctor, especially the more experienced doctor, is taking his rightful place in the industrial team, the other members of which include the managing director, the general manager, the production superintendent, the chief engineer, the chemist, the welfare officer and the senior foreman.

For the doctor has an important part to play. The doctor in industry—the industrial medical officer, as he is known—has been compared to the regimental medical officer of an army unit. He is that and much more besides. He must know the plant as well as the worker. He must know every section of the factory, for only so will he be able to assess every aspect of the environment in relation to the entire organization. He must see the worker in the round. He must visualize the worker not only in relation to his environment but in relation to the group, in relation to authority, in relation to his home and as an individual. This involves not only a physical examination but a psychological examination, as well as an investigation into the social and emotional background of the worker. Only so will the medical officer be able to control the mal-adjusted worker who has become a problem and who shows signs of mental and emotional instability by reduced efficiency. It may be thought that only a few organizations can afford the time and the money to probe, by

design, so purposefully, so intimately, so realistically. But the end-result pays large dividends.

It may be that having listened to this paper you may think industry is stretching out uncertain fingers to grasp some Utopian ideal, a searching for perfection, unattainable. But the mills of industry grind slowly. The study of medical problems in industry, began, crudely, with the treatment of traumatic injuries soon after the arrival of the machine age, nearly 200 years ago, and has progressed so purposefully that the Factories Act, with all its amendments, and the regulations of the Workmen's Compensation Act, have become law in every country in the world. For the history of industrial disease, it has been said,⁶ reflects some of the most important stages in the progress of human civilization and social evolution, so that what may at present appear to be a hesitant groping for some distant ideal, may, in the short space of a following generation be regarded as ordinary and commonplace.

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PASSING EVENTS

Dr. Ruby Sharp and Dr. F. N. Charnock are practising in partnership as Gynaecologists and Obstetricians in Cape Town.

Mr. I. B. Taylor, M.B., B.Ch. (Rand), F.R.C.S. (Eng.), D.O.M.S. (R.C.P. & S.), has commenced practice as an Ophthalmic Surgeon at 216 Harley Chambers, Cor. Jeppe and Kruis Streets, Johannesburg. Telephones: Rooms, 23-6622; Residence, 44-0951.

UNION OF SOUTH AFRICA HEALTH BULLETIN

The following reports cover the seven days ended 8 October:

Plague and Smallpox: Nil.

Typhus Fever: Cape Province. One (1) Native case in the Neise location in the Umtata district. Diagnosis confirmed by laboratory tests.

Epidemic Diseases in other Countries:

Plague: Nil.

Cholera in Bombay, Calcutta, Madras, Nagapattinam (India); Dacca (Pakistan).

Smallpox in Bombay, Cochin, Madras, Masulipatnam, Nagapattinam (India); Haiphong, Saigon-Cholon (Viet-Nam); Phnom-Penh (Cambodia).

Typhus Fever: Nil.

MANUFACTURE OF NEW INSECTICIDES

Scheduled for immediate construction and for completion by mid-1955 a new plant at Pernis (Rotterdam) refinery in Holland will make available for worldwide distribution two new insecticides, aldrin and dieldrin, which have already had international success particularly in regard to locust control and public health applications.

The plant to be erected by Shell Chemicals, at an estimated cost of more than £1,000,000 will make those materials more readily available throughout the world.

A comprehensive development programme has been carried out with aldrin and dieldrin on a worldwide basis and has confirmed the unique value of these materials for the control of soil insects, cotton pests, locusts, ants and many other insects. In particular, the extreme potency and long residual action of dieldrin make this compound invaluable for public health work. It will control both the Anopheline and Culicine mosquitoes which are respectively the carriers of malaria and filariasis.

The terms 'aldrin' and 'dieldrin' were coined from the well-known chemical synthesis, the Diels-Alder reaction used in their manufacture. Chemically, aldrin contains not less than 95% of 1, 2, 3, 4, 10, 10-hexachloro-1, 4, 4a, 4, 8, 8a-hexahydro-1, 4, 5, 8-dimethanonaphthalene, together with 5% or less of related chlorinated hydrocarbons. Dieldrin contains not less than 85% of 1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4, 5, 8-dimethanonaphthalene, together with 15% or less of related compounds.

PRIZE FOR RESEARCH IN THE FIELD OF INFERTILITY

The American Society for the Study of Sterility announces the opening of the 1954 contest for the most outstanding contribution to the subject of infertility and sterility. The winner will receive a cash award of \$1,000, and the essay will appear on the programme of the 1954 meeting of the Society. Essays must be received not later than 1 March 1954. For full particulars concerning requirements of this competition, address The American Society for the Study of Sterility, c/o Dr. Herbert H. Thomas, Secretary, 920 South 19th Street, Birmingham, Alabama.

TOM OSBORN MEMORIAL

AN APPRECIATION AND AN APPEAL BY S. KLEINOT, F.R.C.S. (ED.), CORONATION HOSPITAL, JOHANNESBURG

It is just four years ago that the profession and the nation mourned the passing of the late Dr. T. W. B. Osborn in the prime of his life. His friends and relatives initiated a fund the object of which is to commemorate his life work in some fitting and appropriate manner.

After a brilliant academic career as a student at Jeppe High School, as a Rhodes Scholar at Oxford, and later as a member



Dr. Tom Osborn

of the staff of the Medical School of the University of the Witwatersrand, Dr. Osborn soon found his *métier* as an expert in nutrition. In this capacity he rendered great service to the International Red Cross as the South African representative during the war, giving advice on what foods should be sent to prisoner-of-war camps, and on the post-war problems of occupied Europe.

His efforts in persuading the Allied Economic Blockade authorities to allow supplies of Vitamin D to enter the occupied countries of Europe saved many hundreds of thousands of undernourished children from developing rickets. He had the unique experience of being allowed to travel

through Germany during the war.

Tom Osborn hardly required a global war to stimulate his interest in his fellow men. His first-hand knowledge of the frightful toll in terms of human misery and suffering and the utter frustration of war merely heightened his sense of outrage and added edge to his determination to make his contribution in restoring sanity to a sick world and in playing a yet more active rôle in the day-to-day battle of life, in the full knowledge that by so doing he must inevitably shorten his own.

A great realist, he soon realized that the value of the laboratory, the test-tube of medical science generally, was largely academic in so far as the undernourished and the needy were concerned. He equipped himself with a knowledge of economics and emerged as an able exponent of the modern Keynesian economic philosophy. 'There is no getting away from it that the cure for malnutrition lies not with the doctors,

but with the statesmen and politicians and economists and bankers,' he wrote in 1941.

This outlook was the lodestar of all his subsequent public and social endeavours and led ultimately to his entry into active politics and later into Parliament at a time when his health was rapidly receding.

Osborn adorned Parliament as he had adorned his University and his profession. He was instantly acclaimed. From his maiden speech, brilliant and moving, until his final appearance less than two years later (accompanied by his physician) he was increasingly respected on all sides of the House.

Osborn the humanist, and social biologist, required a much wider canvas than that provided by mere academic achievement for the fulfilment of his life's work. The world became his laboratory, its content his apparatus. His friends and colleagues will long remember him for his grace and charm and elegance; for his persistent and selfless devotion to the cause of the less privileged.

How best are we to honour the memory of this remarkable man? Osborn's interest in nutrition aroused inevitably his interest in the non-European. From his knowledge of economics he knew that a relatively small amount of money wisely spent can bring a great deal of happiness to many people. Shortly before his death in June, 1949, he expressed a wish that a fund be built up to assist the Bantu in making their own contribution to the life of our country by using their gifts in music, literature, art, drama and sport. In partial fulfilment of his last dream a Memorial Fund has already been initiated. It is fitting and appropriate that this fund is affiliated with the National War Memorial Health Foundation—itsself a living memorial and one which Osborn was closely associated with in its formative years.

A good start has already been made and the Memorial has already accepted three projects—the award of money prizes to African composers, the provision of equipment for an Arts and Crafts Training School, and the granting of a bursary to a University student.

The Tom Osborn Memorial Fund constitutes a simple, useful and practical means whereby South Africans can commemorate in a fitting manner one of South Africa's most gifted sons. This is surely something that merits the support of the profession.

The funds of the Memorial will be in the care of the Trustees of the Health Foundation, but as in the case of other special funds will be kept separate from all other funds held by the Trustees. Cheques should be made payable and addressed to: TOM OSBORN MEMORIAL, P.O. Box 1677, Pretoria.

DIE SUID-AFRIKAANSE GENEESKUNDIGE EN TANDHEELKUNDIGE RAAD
THE SOUTH AFRICAN MEDICAL AND DENTAL COUNCIL

Ooreenkomstig Regulasie No. 3 (3) van die Eerste Bylae tot die Wet op Geneeshere, Tandartse en Aptekers van 1928 (Wet No. 13 van 1928) soos gewysig, word hierby bekend gemaak dat die volgende persone geldig genomineer is as kandidate vir verkiesing tot lede van die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad vir die vyfjarige tydperk 1 Januarie 1954 tot 31 Desember 1958.

It is notified in terms of Regulation 3 (3) of the First Schedule to the Medical, Dental and Pharmacy Act of 1928 (Act 13 of 1928) as amended, that the following persons have been validly nominated as candidates for election as members of the South African Medical and Dental Council for the quinquennial period 1 January, 1954, to 31 December, 1958.

Genomineer deur die Geneeshere
Nominated by Medical Practitioners

Black, James, Johannesburg.
Bloom, Arthur, Durban.
Braun, Loswel Israel Braude, Johannesburg.
Bremer, Julius Karl, Pretoria.
Cluver, Eustace Henry, Johannesburg.
Davel, Johannes Gerhardus Albertus, Pretoria.
Deale, Eric William Swain, Durban.
De Villiers, Johannes Philippus, Kaapstad/Cape Town.
De Wet, Johannes Marthinus Benjamin, Kaapstad/Cape Town.
Du Toit, Jacob, Pretoria.
Du Toit, Jacobus Stephanus, Kaapstad Cape Town.

Green, Cyril Arnold Howell, Johannesburg.
 Impey, Robert Lancelot, Kaapstad/Cape Town.
 Kleinman, James, Ladysmith.
 Lawrance, Wilfred Hudson, Pretoria.
 Loubser, Johannes Nicolaas Willem, Bethlehem.
 Nel, Izak Zirk Gerhardus, Pietersburg.
 Proksch, Francis Bruwer, Durban.
 Radford, Aubrey, Durban.
 Schneider, Tobias, Johannesburg.
 Shapiro, Charles, Kaapstad/Cape Town.
 Shapiro, Maurice, Johannesburg.
 Tandy, Guy Terence, Kimberley.
 Theron, Jacob Johannes, Johannesburg.
 Tonkin, Arnold Hugh, Kaapstad/Cape Town.
 Van Niekerk, Jacob Jozua, Germiston.
 Vercueil, Leon Olivier, Florida.
 Wagner, Philipp Frederich Henry, Oos-Londen/East London.
 Wilson, Vernon Hindmarch, Johannesburg.

*Genomineer deur die Tandarts
 Nominated by Dentists*

Breyer, Jan Hendrik, Johannesburg.
 Graham, John William Ernest, Durban.
 Hofmeyr, Roland, Kaapstad/Cape Town.
 Stegmann, Johannes Augustus, Bloemfontein.

Aangesien die aantal tandartse genomineer nie die aantal tandartse wat genomineer moet word oortref nie, verklaar ek die volgende tandartse as verkose lede tot die Raad vir die tydperk 1 Januarie 1954 tot 31 Desember 1958.

As the number of dentists nominated does not exceed the number of dentists to be elected, I declare the following

dentists to have been elected as members of the Council for the period 1 January, 1954, to 31 December, 1958.

Breyer, Jan Hendrik,
 Graham, John William Ernest,
 Hofmeyr, Roland,
 Stegmann, Johannes Augustus.

Aangesien die aantal geneeshere genomineer die aantal geneeshere wat genomineer moet word oortref, word Woensdag 9 Desember 1953 deur my bepaal as synde die dag waarop of waarvoor elke persoon wat geregtig is om by die verkiesing van geneeshere te stem, 'n stembrieffie, ingevolge die Derde Aanhangel tot die Eerste Bylae van die genoemde Wet, mag teken en aan my stuur of oorhandig. 'n Stembrieffie sal gepos word na die laaste geregistreerde adres van elke persoon wat bevoeg is om aan die verkiesing deel te neem.

As the number of medical practitioners nominated exceeds the number of medical practitioners to be elected, I have appointed Wednesday, the 9th December, 1953, as being the day on or before which every person entitled to vote at the election of medical practitioners may sign and transmit or deliver to me a voting paper as described in the third annexure to the First Schedule of the said Act. Voting papers will be posted to the last registered address of each person qualified to vote at the election.

W. Impey
Verkiesingsbeampte

W. Impey
Returning Officer

Posbus 205, Pretoria
 P.O. Box 205, Pretoria

17 Oktober 1953

17 October 1953.

REVIEWS OF BOOKS

PARASITES IN THE HUMAN BODY

A Guide to Human Parasitology. D. B. Blacklock, C.M.G. and T. Southwell, D.Sc., Ph.D., A.R.C.Sc., F.Z.S., F.R.S.E. Revised by T. H. Davey, O.B.E. (Pp. 228 + viii, with 120 figures. Fifth Edition. 25s.) London: H. K. Lewis & Co. Ltd. 1953.

Contents: Preface. Coloured Plates. 1. General Considerations. 2. The Microscope. 3. Examination of Material. 4. Parasitology. 5. Group Sporozoa. 6. Protozoology. 7. Class I. Rhizopoda. 8 and 9. Class II. Mastigophora. 10. Class III. Sporozoa. 11. Class IV. Ciliata. 12. Phylum Platyhelminthes. Class I. Cestodea. 13. Examination of Material. 14. Order Pseudophyllidea. 15. Order Cyclophyllidea. 16. Class II. Trematoda. 17. Superfamily Schistosomatoidea. 18. Superfamilies Opisthorchioidea, Fasciolioidea, Troglotrematoidea. 19. Phylum Nematelminthes. Class Nematoda. 20. Superfamilies Ascaridoidea, Oxyuroidea, Rhabditoidea, Trichinelloidea, Strongyloidea. 21. Superfamily Filarioidea. 22. Congenital Infection and Immunity. Index.

Blacklock and Southwell has always been very popular as a text-book of parasitology with medical students, particularly in the temperate zones of the world. It certainly gives an over-all picture of the parasites to be encountered in the tropics. The book does not pretend to be exhaustive in its treatment of parasitology, but, nevertheless, there are sectors which have been too much neglected. An example is *Endolimax nana*, which might well have been given more than 5 lines. It is becoming increasingly realized that this is not infrequently labelled *Entamoeba histolytica minuta* and is one of the things which causes so much confusion in the pathogenicity of *E. histolytica*. In dealing with the sporozoa, no mention is made of the *Coccidia*, which are considerably more common than *Sarcocystis*.

The keys to the adult worms will prove most useful to people needing help when confronted with wriggling pieces of material, and as these are in the simplest possible form they have everything to recommend them.

One would have liked to see the life tables revised, not so much from the point of view of completeness as of clarity. Possibly a classification of these into the various types of cycle would have been of value.

Despite these criticisms, Blacklock and Southwell will prove a most useful book on the shelves of those who do not have much to do with parasites but may encounter them.

YEAR BOOK OF UROLOGY

The 1952 Year Book of Urology (November, 1951–October, 1952). Edited by William Wallace Scott, M.D., Ph.D. (Pp. 371. \$5.75.) Chicago: The Year Book Publishers, Inc. 1953.

Contents: 1. Reflections on the Endocrine Management of Disseminated Prostatic Cancer. 2. General Considerations. 3. The Kidney. 4. The Adrenals. 5. The Ureter. 6. The Bladder. 7. The Prostate. 8. The Genitalia. Index. Index to Authors.

This 1952 Year Book, once again under the editorship of W. W. Scott, gives a comprehensive review of contributions to urological literature between November, 1951, and October, 1952. The articles reviewed are, for the most part, American, but British, Commonwealth, Scandinavian, French and other journals have not been neglected.

The Editor himself contributes a special article on the complex problem of endocrine management of prostatic cancer, and a number of lively informative postscripts, in small print, to selected reviews.

Some new techniques and appliances are described and illustrated. A new description of a right coccyperineal route for prostatectomy, abstracted from the *Journal of Urology*, will probably fail to appeal to the majority of surgeons.

In the section on the kidneys a considerable amount of space is devoted to renal physiology.

Interest will be aroused by the articles on the use of radio-cobalt, radioactive tantalum wire, and radioactive solutions of bromine and sodium in the treatment of carcinoma of the bladder, and on interstitial radiation of the carcinomatous prostate with radioactive gold.

There are 79 excellent illustrations. Readers of the *Journal of Urology* will recognize with pleasure one or two by William P. Didusch.

Specialists interested in any particular aspect of urology will obviously need to read the original articles in full. Those who feel the need for a summary of recent literature will find this book excellent. Clarity has not been sacrificed to brevity.

The arrangement of subjects is easy to follow and the usual subject index at the end has after it an index of authors.

The general reproduction is very good and this year book fully maintains the standard set by its predecessors.

This publication is accompanied by the usual leaflet containing a urological 'quiz'. This reviewer tried it, and had to look up quite a number of answers.

NEW AMERICAN GERIATRIC JOURNAL

Journal of the American Geriatrics Society, Volume 1, No. 1, January 1953. (Pp. 1-76. Annual Subscription: 82s.) Baltimore: Williams & Wilkins Company. London: Baillière, Tindall & Cox Limited.

Contents: 1. Aging Comes of Age. 2. History of the American Geriatrics Society. 3. Certain Aspects of ACTH and Cortisone Therapy in Older Patients with Rheumatoid Arthritis. 4. Non-Malignant Lesions Causing Bleeding: Diagnostic Procedure and Treatment. 5. Psychiatric Aspects of Mental Competency in the Aging. 6. The Role of Irradiation in the Management of Breast Cancer. 7. The Broadening Indications for Tracheotomy in the Aged. 8. Entero-Vesicle Fistula: An Analysis of Thirty-Four Cases. 9. Some Surgical Aspects of the Aged Person. 10. Current Geriatric Literature.

The recent accelerated increase in the number of senescent has stimulated intensified efforts to impede their physical, mental and emotional degenerations and their aberrant reactions to therapeutic measures. Doctors, especially general practitioners who are daily harassed with the troubles of the elderly, will welcome this journal, noting with gratification that its first number discusses everyday problems at the general practitioner's level. Of the 12 features, one evaluates dispassionately, and offers practical advice on, ACTH and cortisone in arthritis, indicating how to circumvent concealed pitfalls. Another lucid contribution discusses the psychological changes and legal competency of oldsters.

The causes and treatment of post-menopausal haemorrhage are expertly delineated by Dr. G. V. Smith. Dr. Jason reviews concisely methods of assessing patients' suitability for elective surgery and describes pre-operative investigations and safeguards, as well as supportive measures during operation and convalescence.

The editor, W. O. Thompson of Chicago, Professor of Clinical Medicine, is well known, and his collaborators 16 well-known geriatricians, including Kountz, Thewlis, Brul and Korenchevsky.

This is a high-grade periodical, yet of unpretentious and convenient size, deserving widespread popularity.

THE BRITISH NATIONAL HEALTH SERVICE

The National Health Service: A Guide for Practitioners. Edited by Max Sorsby, L.M.S.S.A., with a foreword by Sir Allen Daley, M.D., F.R.C.P. (Pp. 267 + xii. 12s. 6d.) Edinburgh and London: E. & S. Livingstone Limited, 1953.

Contents: Part I. Historical. 1. The Evolution of the Health Service. Part II. The Doctor and His Patient. 2. The Rights and Status of the General Practitioner. 3. The Rights and Status of the Patient.

Part III. The Statutory Bodies. 4. The Medical Practices Committee. 5. The Executive Council. 6. The Local Medical Committee. 7. National Insurance and Pensions in Relation to the Health Service. 8. The Local Health Authority. 9. Hospital Boards.

Part IV. The Non-Statutory Bodies. 10. The General Medical Services Committee. 11. The British Medical Association and the Guild.

Part V. The Special Services. 12. The Dental Services. 13. The Eye Service. 14. The Maternity Service. 15. The Pharmaceutical Service. 16. The Hospital Welfare Service. 17. The Coroner.

Part VI. The Future. 18. Some Remediable Deficiencies. 19. Looking Forward. Index.

This small volume of 262 pages, with its comprehensive index, sets out lucidly the present position of the National Health Service in the United Kingdom. This infant, just turned five, is growing rapidly; and the resultant many amendments to the National Health Service Act to keep pace with such growth make it manifestly impossible to publish any manual which can take cognizance of such changes and embody the most

recent amendments particularly in so far as fees and benefits are concerned. Nevertheless, the medical practitioner or student investigating this service will have most of his problems answered by reference to this little book.

Its application to the Union is limited, but our present health organizers and planners may derive much benefit from its perusal. The present set-up in the National Health Service in Britain, as all will agree, is not perfect, but the hope remains that its scope will be so adjusted as to link up the curative and preventive services of the central government, local authorities, and voluntary agencies, with those of general practice. These sentiments are well exemplified in the final chapter entitled 'Looking Forward'. For the present-day working and administration of the National Health Service in Great Britain this volume can be recommended.

MODERN TREATMENT

Modern Treatment. By 53 Authors. Edited by Austin Smith, M.D., and Paul L. Werner, M.D. (Pp. 1146. 520.) New York: Paul B. Hoeber, 1953.

Contents: Contributors. Preface. 1. The Patient-Physician Relationship. 2. Pharmacologic Principles in Treatment. 3. Principles of Clinical Immunology. 4. Sulfonamides and Antibiotics. 5. General Principles of Infection. 6. Bacterial Infections. 7. Viral Infections. 8. Rickettsial Infections. 9. Parasitic Infections. 10. Heart Diseases. 11. Vascular Diseases. 12. Diseases of Arteries and Arterioles. 13. Vascular Diseases. 14. Diseases of Veins, Lymphatics, and Capillaries. 15. Anticoagulant Therapy. 16. Blood Diseases. 17. Hypertension. 18. Respiratory Diseases. 19. Gastrointestinal Diseases. 20. Kidney Diseases. 21. Water and Electrolyte Balance. 22. Diseases of the Nervous System: I. Infectious, Neuritic and Degenerative Diseases. 23. Diseases of the Nervous System: II. Functional, Traumatic and Neoplastic Diseases. 24. Pain and Insomnia. 25. Psychosomatic Principles in Treatment. 26. Allergy. 27. Diseases of Physical Origin. 28. Arthritis. 29. The Endocrine Glands. 30. Androgenic and Pituitary Therapy. 31. Ovarian Dysfunction. 32. Diseases of the Thyroid. 33. Diseases of the Adrenal. 34. Diabetes Mellitus. 35. Nutritional Principles in Treatment. 36. Obesity. 37. Treatment in Obstetrics. 38. Infertility and Gynecologic Treatment. 39. Otolaryngologic Diseases. 40. Ophthalmologic Diseases. 41. Dermatologic Diseases. 42. Syphilis. 43. Nonsyphilitic Venereal Diseases. 44. Geriatrics. 45. Surgical Principles in Treatment. 46. Secondary Shock. 47. Anesthetic and Inhalation Therapy. 48. Physical Therapy in Treatment. 49. Therapeutic Radiology. 50. Diagnostic Radiology. 51. Diagnostic Techniques. 52. Cardiovascular, Renal, Hematologic and Immunologic Tests. 53. Diagnostic Techniques. 54. Gastroenterologic, Endocrine, Respiratory, and Miscellaneous Tests. 55. Toxicologic Problems. 56. Poisoning by Pesticides. Appendix. Normal Clinical Laboratory Values. Index.

The most cursory perusal of the table of contents listed above cannot fail to impress the searcher after guidance in modern therapy in general practice. At the same time there is every likelihood of his being overwhelmed by the immense amount of information packed into 1,146 pages of type-script. This possibility is intensified when it is realized that this ambitious tome is intended primarily, and particularly, for the busy general practitioner and senior student. Much of the bulk of the book, and the awe it induces, might have been reduced by omitting the minutiae of laboratory technique and the details of special investigation, which the average clinician, and certainly nearly every general practitioner, is unlikely to carry out himself, no matter how interested in the particular subject he might be.

One hesitates to remind the reader of the inevitably transient value of such a comprehensive work, as it is the details of specific treatment and not the fundamentals of well-proven principles which are tirelessly recorded. Nevertheless this initial irritation is soon countered by the excellence of certain sections, such as those specially devoted to the use of anti-coagulants, the treatment of hypertensive heart disease, and the remarkable one concerned with pesticides, a subject of ever-increasing importance as a hazard in general practice nowadays. On the other hand the section dealing with clinical immunology, while of practical importance, might have benefited from pruning and consequent clarity, as the theories of immunology are better studied in special works on this subject. The section on sulphonamides and antibiotics, while compact, is curiously vague where schemes of dosage are concerned, though this too is in a large measure corrected in the chapter dealing with specific diseases.

Two sections of some 60 pages on diagnostic technique are comprehensive and interesting, but it is debatable whether their place in a text-book, already voluminous, is justified. Not unexpectedly, the table of contents is somewhat awkwardly

arranged for so large a work, but on turning to the 20-page index one is still not led easily and quickly to the subject sought. For example, under the headings Typhoid Fever and Pneumonia, no fewer than 5 references are given in each instance with no indication by italicized figures or by other means as to which is the main subject matter.

One regrets being so critical of a work that has entailed obvious industry and prodigious labour, but the distinct impression remains that overdue enthusiasm has resulted in an over-ambitious project.

OBSTETRICS

A Guide to Obstetrics in General Practice. By William C. W. Nixon, M.D. (Lond.), F.R.C.S. (England), F.R.C.O.G. and Eric B. Hickson, M.R.C.S., L.R.C.P., D. (Obst.), R.C.O.G. (Pp. 301. 30s.) London and New York: Staples Press, 1953.

Contents: 1. Vital Statistics—Social Factors—Definitions. 2. Desirability of Pregnancy. 3. Diagnosis and Duration of Pregnancy. 4. The Care of the Expectant Mother. 5. Discomforts of Pregnancy. 6. Abnormal Pregnancy. 7. Certain Aspects of Normal Labour. 8. Sedatives and Anaesthetics. 9. Obstetric Emergencies—Midwives' Calls. 10. Abnormal Labour. 11. Certain Aspects of the Normal Puerperium. 12. The Start of Breast-Feeding and Some of its Difficulties. 13. Complications of the Puerperium. 14. Care of the Premature Baby. 15. Disorders, Diseases and Deformities of the Newborn. 16. Obstetric Operations. 17. Postnatal Care. 18. The National Health Service and Obstetrics. Appendices. Index.

One author of this excellent book is a professor of Obstetrics and Gynaecology at University College Hospital, London, and the other a country general practitioner.

This combination, together with chapters by Waller—a world authority on the care of the breast and breast-feeding—has resulted in a valuable obstetrical text-book which is easy to read and assimilate.

It embraces most of the modern trends in obstetrics in a most lucid fashion, with due emphasis on the practical applications thereof. There is a welcome attention to detail on practical subjects usually omitted by text-books on obstetrics, e.g. the difficulties encountered with breast-feeding; the indications for episiotomy; the contents of an obstetrical bag; how to arrange the adoption of a child, etc.

Antenatal supervision, normal labour, the puerperium and the psychological aspects of pregnancy are excellently done.

Medical students are advised to study this book, whilst general practitioners, especially those in rural areas, will find it delightful and stimulating reading.

As one who has practised in a country district, I most strongly recommend this book.

BRITISH ENCYCLOPEDIA OF MEDICAL PRACTICE

The British Encyclopaedia of Medical Practice, Vol. 12. Edited by The Rt. Hon. Lord Horder. (Pp. 738 + xi with 144 illustrations. Second Edition. £3 7s.) Durban: Butterworth & Co. (Africa) Limited, 1953.

Contents: 1. Talipes. 2. Tapeworm Infections, Intestinal. 3. Testicular Capacity. 4. Testis and Cord Diseases. 5. Testis, Undescended. 6. Tetanus. 7. Thymus Gland Diseases. 8. Thyroid Gland Diseases. 9. Tonsils Diseases. 10. Torticollis. 11. Torulosis. 12. Toxicology: Homocidal, Suicidal and Accidental Poisoning. 13. Toxicology: Industrial Poisoning. 14. Toxicology: Poisons Legislation—Medical Aspects. 15. Toxicology: Drug Addiction. 16. Trachea Diseases. 17. Trachoma. 18. Trench Fever. 19. Trichiniasis. 20. Tropical Sprue. 21. Tropical Ulcer. 22. Trypanosomiasis. 23. Tuberculosis. 24. Tuberculosis, Generalized. 25. Tuberculosis—of the Female Genital Tract. 26. Tularaemia. 27. Tumours. 28. Typhus Fevers and Other Rickettsial Fevers. 29. Umbilical Diseases. 30. Undulant Fever. 31. Uraemia. 32. Urethra Diseases. 33. Urinary Pigments. 34. Urine Examination. 35. Urogenital Organs—Abnormalities. 36. Urticaria Pigmentosa. 37. Uterus—Physiology. 38. Uterus—Developmental Abnormalities. 39. Uterus—Displacements. 40. Uterus—Prolapse. 41. Uterus—Tumours. 42. Uveal Tract Diseases. 43. Vaccinia and Vaccination. 44. Vein Diseases. 45. Veldt Sore. 46. Vertebral Column—Injuries and Diseases. 47. Vertigo. 48. Vesiculitis. 49. Vitellum and Other Metals used in Surgery. 50. Vitamins. 51. Vulva and Vagina Diseases. 52. Wernicke's Encephalopathy. 53. Whooping-Cough. 54. Yaws. 55. Yellow Fever. Index.

The publication of this volume completes the issue of the second edition of the *British Encyclopaedia of Medical Practice*, except for the Index.

The last volume covers the alphabetical list of topics ranging from Talipes to Yellow Fever.

The undertaking of a second edition was undoubtedly a

monumental and ambitious task, but it is quite clear that under the able editorship of Lord Horder, the work has been carried out admirably. The new edition must rank as one of the standard contributions to contemporary clinical literature.

It will prove an invaluable source of reference to the undergraduate student and the general practitioner, as well as the specialist. The publishers as well as the Editor and the authors are to be commended for this outstanding and beautifully produced series of volumes.

HISTOLOGICAL TECHNIQUE

Laboratory Technique in Biology and Medicine. By E. V. Cowdry. Third Edition. (Pp. 382 + xxxi. 35s.) London: Baillière, Tindall & Cox, Limited, 1952.

This laboratory handbook is a reference book arranged, not in the usual way in chapters, but in dictionary form. It deals almost entirely with histological technique and interpretation and it is a pleasure to welcome it again in a new form. Proof of its excellence may be seen in the fact that it is already in its third edition only 9 years after birth. Dr. Cowdry has been helped by a panel of experts in various fields and one has the impression all through that the methods used and recommended have been personally tried out. Thus the comments on the reliability of the techniques described are of great value.

A perusal of this work shows how much histology, or more exactly histochemistry, has evolved during the past 20 years and how it has been transformed into a dynamic subject now closely allied to biochemistry. A technique that has proved of immense help in this is the Altmann-Gersh freeze-drying method of preserving tissues. With this method it has been possible to locate soluble inorganic and organic substances with appropriate chemical reactions and also to identify various intracellular enzymes. In the section written by Dempsey are mentioned more than 20 enzymes which can now be detected and located by histochemical means, and it is stated that the number of methods for others is rapidly increasing.

The localization and reactions of inorganic elements has been made much easier by the use of radio-active isotopes and by the development of radio-autographs whereby the position of the radio-element can be determined microscopically. One need hardly mention the electron microscope, as the potentialities of this instrument are well known. A long section in this work is devoted to shadow-casting, without which the electron microscope would have been much less valuable. These and many other techniques too varied to mention are either described in detail or else references to the relevant papers are given.

The various sections are listed in alphabetical order. This system has many advantages and in general cross-references enable one to find what one wants quickly. While ion-exchange resins are described under *decalcification*, it is rather surprising that chelating agents are not mentioned. These offer possibilities of ion exchange and removal under more favourable conditions than many of the older methods.

From what has been said it is clear that this work has not only maintained its previous high reputation, but has enhanced this by including many new techniques of proved value. We can only say that it should be on the laboratory bench of all histologists and histological technicians.

DIAGNOSTIC TESTS IN NEUROLOGY

Diagnostic Tests in Neurology: A Selection for Office Use. By Robert Wartenberg, M.D. (Pp. 228. \$4.50.) Chicago: The Year Book Publishers, Inc. 1953.

Contents: Introduction. 1. Cranial Nerves. 2. Peripheral Nerves. 3. Pyramidal System. 4. Extrapyramidal System. 5. Cerebellar System. 6. Sensory System. 7. Vasomotor-Trophic System. Indexes.

For almost 4 decades Dr. Wartenberg has been noted for his concise and extremely thorough researches into neurological problems, first in the German and later in the American periodicals, so that this small book on diagnostic tests in neurology is most welcome.

It is written as a 'supplement to the text-books of

neurology' for the general practitioner and as a 'post-graduate refresher course' and it succeeds admirably in these aims. Dr. Wartenberg is brief and dogmatic in what he says and he illustrates his points admirably. Many of the tests are personal ones devised by the author. They are practical and simple, although here and there one wonders, as for example in the 'kicking test for sciatica' (p. 206), whether any useful purpose can be gained by emphasizing what must have been apparent in routine examination.

There are singularly few matters about which one can quibble, but one wonders how the cervical sympathetic fibres pass on to the first division of the trigeminal nerve via the Grasserian ganglion (p. 46), and not many clinicians would agree that in the presence of coarse and slow nystagmus to one side 'the first assumption must be a cerebello-pontine angle tumour' (p. 46), nor that 'paralysis of a single nerve, such as the facial . . . always produces contractures of the antagonists, which are spared' (p. 80). Nevertheless this book is an admirable one and as refreshing as it sets out to be, and one might recommend in particular its first chapter to anyone, from student to specialist, who has to deal with neurological cases. Finally Dr. Wartenberg deserves a special word of praise for his fight against confusing eponyms and for his short but enlightening essays into the history of neurological tests and signs.

MEDICINE

Medicine, By H. J. Garland and W. Phillips. (2 volumes. Pp. 2146. 120s.) London: MacMillan & Company, 1953.

Contents: Volume I. 1. The Evolution of Modern Medicine. 2. The Assessment and Promotion of Physical Health. 3. The Assessment and Promotion of Mental Health. 4. The Natural History of Disease. 5. Social Aspects of the Aetiology of Disease. 6. The Genetic Factor in Disease. 7. The Patient as a Person. 8. Nutrition and Disease. 9. Infection and Immunity. 10. Neoplasms. 11. The Principles of Diagnosis in Disorders of Adults. 12. The Principles of Diagnosis in Disorders of Children. 13. The Place of Radiology in Diagnosis. 14. Laboratory Medicine in Diagnosis. 15. General Principles of Treatment in Adults. 16. General Principles of Treatment in Children. 17. Symptomatic Treatment and the Use of Drugs. 18. Rehabilitation. 19. The Frequency and Mortality of Common Diseases. 20. Psychosomatic Medicine. 21. The Psychoneuroses. 22. The Psychoses. 23. Endocrine Disorders. 24. Metabolic Disorders. 25. Vitamin Deficiency Diseases. 26. The Skin in General Medicine. 27. Common Fevers. 28. Venereal Diseases. 29. Other Communicable and Allied Disorders. 30. Tropical Diseases of Importance in Temperate Climates. 31. Infestations (Helminthiasis). 32. The Effects of Physical Agents. 33. Diseases Principally Encountered in Industry. 34. Aviation Medicine. *Volume II.* 35. Diseases of the Digestive System. 36. Diseases of the Nervous System. 37. Disorders of the Locomotor System. 38. Diseases of the Haemopoietic System. 39. Diseases of the Spleen, Reticulo-Endothelial System and Lymph Nodes. 40. The Cardiovascular System. 41. Diseases of the Respiratory System. 42. The Urinary System. Index.

This two-volume publication is a new and welcome departure from the usual run of text-books of Medicine. Approximately half of the contents are of a more or less standard 'text-book of medicine' type, dealing seriatim with the different systems of the body, each section being written by an expert in his own field. Some sections are better than others, and on the whole these chapters are equal to or better than the average text-book standards.

The special feature of the book is, however, the emphasis which it places on integral medicine—the man, his health, his illnesses, his inherited and acquired constitution, and his environment. All text-books of Medicine, including this one, have many chapters on the causes, clinical features and treatment of disease; this text-book is unique in the time and space it devotes to the causes of health, physical and mental. The earlier chapters include good articles on normal psychology and psychometry, on the place of Medicine in society, and on the social aspects of health and disease. Before dealing with the 'system diseases', the clinical diagnostic approach is considered in a general manner, and in its relation to special investigations by X-ray and by the laboratory. The section on the place of radiology in the practice of clinical medicine is a minor text-book in itself, well and profusely illustrated. The early chapters also include discussion of general principles of integral treatment, symptomatic and radical, and 2 chapters on the general pathology of inflammation and tumours, both of which are well illustrated. Not the least important chapters in the first volume are those on industrial and aviation medicine.

It is significant of the theme of the whole book, that the first 'system' dealt with as a system is the Mind and its disorders—the psychoneuroses, 'psychosomatic' relationships, and the psychoses.

The character of the book is such that even in its present form, much of it will remain undated for many years to come, particularly the general concept of health enunciated in the earlier chapters. The general integral approach to the individual and his health and illnesses must to-day be the basis of all clinical teaching, and the book is an expression of that approach.

It is eminently readable in most sections, and is a book that all medical practitioners would gain much from, both in regard to the proper philosophy of medical practice, and in regard to the handling of individual diagnostic and therapeutic case problems.

For undergraduate students it would, at first sight, appear to be alarming in size and price; and, indeed, on this account, it is hardly likely to become a popular text-book for examination purposes. Nevertheless, its general holistic message is so important that students would be well advised to browse through it from time to time in their Medical School Library, if not in their own studies, in order to maintain a balanced outlook on what is important in dealing with the problems of individuals in their future practices.

YEAR BOOK OF PATHOLOGY AND CLINICAL PATHOLOGY

The 1952 Year Book of Pathology and Clinical Pathology, (January—December 1952). Edited by Howard T. Karsner, M.D., LL.D., and Arthur Hawley Sanford, M.A., M.D. (Pp. 400, with 163 figures. \$5.50.) Chicago: Year Book Publishers, Inc. 1953.

Contents: Pathology: 1. General Pathology. (a) Infectious Diseases. (b) Physical Injuries. (c) Granulomatous Disorders. (d) Neoplasia. (e) Miscellaneous. 2. Cardiovascular System. 3. Hemopoietic System. 4. Respiratory System. 5. Alimentary Tract and Associated Glands. 6. Female Genitalia and Breast. 7. Urinary System and Male Genitalia. 8. Glands of Internal Secretion. 9. Musculoskeletal System. 10. Skin. 11. Nervous System. 12. The Eye. *Clinical Pathology:* 13. Introduction. 14. Hematology. 15. Chemistry. 16. Bacteriology and Virology. 17. Mycology. 18. Serology. 19. Parasitology. 20. Cytology. 21. Microscopy. 22. Apparatus.

The 1952 Year Book of Pathology and Clinical Pathology consists of abstracts of 340 articles which appeared in the world literature during the period January to December 1952. Many of these are well illustrated and many are accompanied by brief, but informative and constructive critiques by the editors. The result is a very convenient and valuable source of references to important contributions during 1952 in the fields of pathology and clinical pathology, while the authoritative comments by the distinguished editors are of assistance in placing these articles in their proper perspective.

There will be few pathologists who will not find something interesting and useful in this book, while the advances detailed in the volume which shed light on new diagnostic and therapeutic procedures should make it useful also to the clinician. Those who are still hesitant should browse through the small quiz leaflet enclosed in the book. The 22 questions therein should convince them.

It is refreshing to see an increase in the number of South African contributions to the medical literature which have been abstracted and reviewed.

MEDICAL ANNUAL 1953

The Medical Annual 1953. By 44 contributors. Edited by Sir Henry Tidy, K.B.E., M.A., M.D., F.R.C.P. and A. Rendle Short, M.D., B.S., B.Sc., F.R.C.S. (Pp. 532, with figures.) Bristol: John Wright & Sons Ltd. 1953.

The Medical Annual has now reached its 71st year of publication and the 1953 edition is every bit as good as its predecessors. The general pattern is no doubt familiar to many. The introduction by the editors is a brief résumé of the outstanding achievements during the year in the field of medicine

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(the term being used in its widest sense). This is followed by a fascinating article by Dr. Charles Singer on 'Medicine in the reign of Elizabeth I'. Then follows in alphabetical order a review of the year's work. In this section, which occupies the greater part of the book, each reader will find papers in his own sphere of interest. Many of the leading figures in British medicine appear as contributors to this section and they review the foreign as well as the British literature. Furthermore, after weighing up the pro's and con's they frequently give their own opinions on the matter. It is the manner in which this aspect is presented which makes this publication superior to some of its competitors in the same field of medical writing.

Not unnaturally ACTH, cortisone and the adrenal cortex receive a lot of consideration. It is not without interest that the awesome respect with which Selye's general adaptation syndrome was received seems to be giving way to sceptical and critical study which, like any scientific hypothesis, it deserved. There are a number of papers on backache and discs (cervical and lumbar) as well as a challenging one written from the orthopaedic aspect on the 'sprung back' due to a tear of the supraspinatus ligament; and from antibiotics, isonicotinic hydrazide and epidemic haemorrhagic fever, through diphtheria, diabetes and peptic ulcer to the rarities of renal infantile acidosis and Fanconi's syndrome and very much more besides.

The book is well produced and reasonably priced. The quality of the plates and the reproduction of the radiographs is excellent. This book provides one of the best and most enjoyable ways in which the busy practitioner can keep up to date with the incredible speed of present day medical progress.

LIND'S TREATISE ON SCURVY

Lind's Treatise on Scurvy: A Bicentenary Volume Containing a Reprint of the First Edition of A Treatise of the Scurvy by James Lind, M.D. Edited by C. P. Stewart, Ph.D., D.Sc. and Douglas Guthrie, M.D., F.R.C.S.E. (Pp. 440 + xi, with illustrations. 45s.) Edinburgh: Edinburgh University Press. 1953.

Contents: Part I. 1. A Critical History of the Different Accounts of this Disease. 2. Of its Several Divisions, viz. into Scurvies Cold and Hot, Acid and Alkaline, etc. 3. Of the Distinction Commonly Made into a Land and Sea Scurvy. 4. Of the Scurvy being Contagious, Hereditary and Infectious. Part II. 1. The True Causes of the Disease, from Observations made upon it, both at Sea and Land. 2. The Diagnostics, or Signs. 3. The Prognostics. 4. The Prophylaxis, or means of Preventing this Disease, Especially at Sea. 5. The Cure of the Disease, and its Symptoms. 6. The Theory. 7. Dissections. 8. The Nature of the Symptoms, Explained and Deduced from the foregoing Theory and Dissections. Part III. 1. Passages in Ancient Authors, Supposed to Refer to this Disease: Together with the First Accounts of it. 2. *Bibliotheca Scorbutica*: or, A Chronological View of what has hitherto been Published on the Scurvy. Appendix. A Chronological Index of Authors. An Alphabetical Index of Authors, etc. Additional Notes—Biographical and Technical.

Drs. Stewart and Guthrie are to be congratulated on the production of this bicentenary volume, which includes the reprinting of the first edition of Lind's *Treatise on Scurvy* in modern typography, additional biographical and historical notes, and two short chapters on the modern knowledge of vitamin C.

It is really the *Treatise*, however, that makes absorbing reading. The style and arrangement is remarkably modern. Lind's recognition of the antiscorbutic properties of certain fruits and vegetables was not original, but he was a keen observer and clear thinker. Having reviewed the previous literature and discarding 'all systems and theories which were found to be disavowed by nature and facts', he put his theory to the test in the famous controlled experiment on the fifty-gun Fourth-rater *H.M.S. Salisbury*. Six pairs of seamen with scurvy of comparable severity on a common diet were each given one of six reputed remedies. Only those receiving oranges and lemons recovered rapidly. He was modern enough to recognize the possibility of conditioning factors such as fever, exposure, etc.

Lind should be remembered not only for his *Treatise* but also for his clear recognition of the value of preserving health.

The book is well-produced and may be read with profit by doctor and student but it is of particular interest to workers in the nutritional field.

OBSTETRICS AND GYNAECOLOGY, CONGRESS TRANSACTIONS

Transactions of the Fifth American Congress on Obstetrics and Gynecology. (Published as a supplementary volume to the American Journal of Obstetrics and Gynecology, December 1952.) Edited by George W. Kosmak, M.D. (Pp. 599. £5 6s. 3d.) St. Louis: C. V. Mosby Co.

Contents: 1. Invocation. 2. Address of Welcome. 3. Changing Times and the American Committee. 4. Introduction to the Program. 5. Introductory Remarks on Causes and Prevention of Neonatal Mortality. 6. Postmortem Examination. 7. A Statistical Study of Factors Related to Neonatal Deaths. 8. Epidemiologic Investigation of Neonatal Deaths. 9. Minimal Standards for Sterility Investigations. 10. Surgical Aspects of Sterility. 11. Endocrine Therapy of Sterility. 12. Complications of the Puerperium. 13. Present-Day Concepts of Rh-Hr Sensitization. 14. Experience with ACTH in Rh-Sensitized Patients. 15. Exchange Transfusions in Erythroblastosis Fetalis. 16. Prenatal Care in a Metropolitan Area. 17. Maternal Care in a Rural Area. 18. Development of Prenatal Care Programs in Colorado. 19. Organization of the Maternal Welfare Committee on the Hospital Level. 20. The Organization and Operation of Maternal Welfare Committees on the City Level. 21. The Organization of Maternal Welfare Committees at the State Level. 22. The Organization and Operation of Maternal Welfare Committees. 23. Contracted Pelvis. 24. Prolonged Labour. 25. Management of Breech Presentation. 26. Indications for Cesarean Section in Dystocia. 27. Maternity Care To-day—What is Needed for To-morrow? 28. Breast Feeding. 29. Midwife Practice in Sweden. 30. Maternal Care To-day. What is Needed for To-morrow? 31. Incontinence Due to Local Lesions in the Urethra and Bladder. 32. Kelly and Sling Operations for Incontinence. 33. Vesico-vaginal Fistula. Experiences at the Mayo Clinic. 34. Maternal Mortality in Downstate Illinois, 1948-1951. 35. Maternal Mortality in North Carolina. 36. Obstetric Haemorrhage. 37. Aids in Prevention of Maternal Mortality Due to Infection. 38. The Prevention of Maternal Mortality from Toxemia of Pregnancy. 39. Introductory Remarks by the Chairman. 40. Carcinoma of the Vulva. 41. Vulvar Lesions. Chancroid, Granuloma Inguinale, and Lymphogranuloma Venereum. 42. Syphilitic Lesions of the Vulva. 43. Systemic and Allergic Diseases of the Vulva. 44. Introductory Remarks by the Chairman. 45. A Physician's Viewpoint on Preparation for Childbirth. 46. Preparation for Childbearing. 47. The Diagnosis of Cancer of the Cervix. 48. The Treatment of Carcinoma of the Cervix. 49. Adenocarcinoma of the Endometrium. 50. The Place of Extensive Surgery in Cancer of the Cervix. 51. The Doctor-nurse-parent Relationship in Maternity Care. 52. Active Participation of Doctor, Nurse and Parents in a Vital Living Experience. 53. Doctor, Nurse, Parents—Learning and Working Together. 54. Doctor, Nurse, Patient—Learning and Working Together. 55. Introductory Remarks by the Chairman. 56. Haemorrhage in the First and Second Trimesters. 57. Placenta Previa and Abruptio Placentae. 58. Endometriosis. Comments on its Pathology. 59. Endometriosis. 60. Infertility and Endometriosis. 61. Experimental Endometriosis. 62. Pregnancy Associated with Tuberculosis. 63. Heart Disease and Pregnancy. 64. Pregnancy Complicating Diabetes. 65. Proposed EMIC Legislation. 66. How the Obstetrician and the Public Health Officer Can Work Together. 67. The (Emotional) Education of the Obstetrical Patient. 68. A New Concept for Undergraduate Education in Obstetrics and Gynecology. 69. The Education of the Doctor. 70. The Education of the Hospital. 71. Benign Tumors of the Ovary. 72. Malignant Ovarian Tumors. 73. Hormonally Active Ovarian Tumors. 74. Are Fundamental Administrative Changes Necessary to the Provision of To-morrow's Maternity Care? 75. The Etiology of Toxemia of Pregnancy. 76. An Approach to Normal Water Balance in the Treatment of Toxemias of Late Pregnancy. 77. Treatment of Toxemia of Pregnancy. 78. Changing Concepts in the Indications for Cesarean Section. 79. Evaluation of Operative Techniques in Cesarean Section. 80. The Obstetric Future of the Cesareanized Patient. 81. Myomas of the Uterus. 82. Role of Endometrium in Implantation and Fetal Growth. 83. Safeguarding the Newborn. 84. Safeguarding the Newborn. Scientific and Educational Exhibits. Prize Awards.

The 600 pages of the *Transactions* give an excellent cross-section of current American views in this field.

Not many of the articles can be described as representing original work, but as rather the authoritative views of selected authors. Nevertheless valuable statistics are put forward by several authors to support the opinions expressed.

Controversial views are expressed in some of the papers, but the opposite opinions are usually well aired in the subsequent discussion. Thus in the paper on endometrial adenocarcinoma, McKelvey, Holly, and Prem found no evidence in 29 cases for the modern view that radium treatment should precede hysterectomy, but in the discussion Scheffey reviews 179 cases and found a 62.5% 5-year cure rate with adequate surgery, a 54.8% cure rate with radium only, and a 91.3% cure rate with radium followed by hysterectomy.

The Congress is sponsored by the American Committee on Maternal Welfare. It is therefore to be expected that maternal welfare figures largely in the *Transactions*, and anyone interested in this subject cannot afford to miss the authoritative papers covering organization and operation of Maternal Welfare Committees in rural and city areas, at hospital level, city level, and state level.

It is impossible to give a detailed review of a volume, which covers the whole field of obstetrics and gynaecology in 89

separate articles. These obviously must vary greatly in standard, but nevertheless this volume will be a most valuable addition to the bookshelves of anyone interested in obstetrics, gynaecology, or maternal welfare organization.

CLINICAL INVESTIGATION

Clinical Investigation: A Manual for Practitioners and Students by E. H. Stokes, M.D., Ch.M. (Sydney), F.R.A.C.P. (Pp. 628 + xi, with illustrations. £5 5s.) Sydney; London: Angus & Robertson, Limited. 1953.

Contents: 1. Case-recording. 2. General Appearances in Disease. 3. The Circulatory System. 4. The Respiratory System. 5. The Alimentary System. 6. The Genito-Urinary System. 7. The Nervous System. 8. The Haemopoietic System. 9. Errors and Pitfalls in Diagnosis. Appendix I and II. Index.

Seldom does one see such uniformly first-class illustrations and figures incorporated in a book on clinical investigation. The striking feature of this book is no doubt the 340 illustrations and figures, the excellent photographs showing characteristic traits of disease and the well-selected and well-printed X-ray films. Case-history recording is still fundamental in clinical investigation, and forms the prelude to the details of examination of the various systems.

In the cardiovascular system the author starts off well with a simple, lucid description of the cardinal symptoms and manifestations; perhaps the importance of the phonocardiograph in the description of murmurs is overstressed at the expense of observation on the part of the student. The X-ray and electrocardiographs are well selected and reproduced.

The nervous system is the key or master system of the body, controlling all its reactions. These opening words in Chapter VII lead to a well-set-out description of symptoms and methods of examination; in the preface the author acknowledges his debt to Walsche for certain ideas incorporated, but there are many original features.

The chapter on errors and pitfalls in diagnosis is not without

interest and value, but many of these would have been more appropriately incorporated in the respective systems to which they belong or refer to. This should be remedied in the next edition.

The author starts each new chapter with an apt quotation. The book is well printed and bound, and work from the Medical School of a fellow member of the British Commonwealth of Nations is welcomed. It is recommended to medical students in South African Universities.

LAW AND ETHICS OF DENTAL PRACTICE

The Law and Ethics of Dental Practice. By R. W. Durand, M.R.C.S., L.R.C.P. and D. Morgan, L.D.S. (Pp. 98 + vii. 7s. 6d.) London: Hodder & Stoughton Medical Publications. 1950.

Contents: Foreword. 1. The Dentists Acts. 2. The Ethics of Dental Practice. 3. Contracts. 4. Legal Obligations to the Patient. 5. The Dangerous Drugs and Pharmacy and Poisons Acts. 6. General Anaesthesia. 7. Precautions Against the Inhalation of Foreign Bodies. 8. Fractures. 9. Dentures. 10. Record Keeping. 11. Practice Management. 12. Appendices. 13. Index.

As will be seen from the chapter titles above, this work of less than a hundred pages covers a wide field and yet deals with all the subjects adequately. Although it is written primarily to assist dentists practising in the United Kingdom, ethics are essentially the same the world over and the law as it affects dentists is much the same as that governing the acts and omissions of doctors.

To dentists this book should be of great assistance as a guide, while to doctors it will have some value as a work of reference as so few books on ethics and responsibility are available.

In view of their experience as Secretary of the Medical Protection Society and Deputy Dental Secretary of the British Dental Association, the authors have the right qualifications for the production of a book of this nature and they have done their work well.

CORRESPONDENCE : KORRESPONDENSIE

THE DOCTOR'S INCOME-TAX GUIDE

To the Editor: I beg to submit the following amendments to *The Doctor's Income-Tax Guide* resulting from 1953 legislation.

Page 15: (Heading 'Schedule C') New Paragraph 5: 'Although interest on Savings Fund Levy, at 4 per cent per annum from date of payment, is receivable only after five years, it may be computed each year and returned under this Schedule as income accrued'.

Page 41: Sub-heading 'Surcharge' under each example: 'For 1953 the surcharge is increased to 30 per cent, the additional 10 per cent being Savings Levy, which is refundable after five years plus simple interest at 4 per cent per annum'.

After sub-head 'Provincial Income Tax' at the end of first example add: 'Savings Levy: Add to above £6'.

Page 42: In last column (headed 'Natal') delete '(All amounts subject to rebate of 12½ per cent)'.

Page 44: Add at foot:

'Savings Levy: Basic	£6 0 0
10% Normal Tax	26 0 0
10% Super Tax	55 0 9
*	£87 0 9

Refundable after 5 years plus simple interest at 4 per cent per annum'.

P.O. Box 5589,
Johannesburg.
12 October 1953.

J. Lavine.

[*The Doctor's Income-Tax Guide* was published in the *Journal*, 1 September 1951, Vol. 25, p. 624. It can be obtained in reprint form from Medical House, P.O. Box 643, Cape Town. Price 2/6d. payable with order.—Ed.]

DIE STUUR VAN PASIËNTE NA DIE BUITELAND VIR BEHANDELING

Aan die Redakteur: Graag wil ek kollega Townsend¹ en u gelukwens met die opening van gedagtewisseling oor bogenoemde onderwerp.

Daar is groot en mooi hospitale in die Unie van Suid-Afrika. Groot somme uit die belastingelde is beskikbaar vir behandeling en verpleging van pasiente en vir gesondheidsorg. Die Universiteite en hulle dosente doen alles om die onderwys so goed as moontlik te maak.

Dit het ek alles mooi kon bestudeer, want as 'n uitlander het ek, 'n Nederlander, teen die end van 1940 in hierdie land gekom en die laaste 3 jare van die opleiding vir M.B., Ch.B. moes herhaal. Na my ervaring as 'n praktisyn, spesialis en dosent op die Vasteland en in Java het ek daardie 3 jare in Witwatersrand se Universiteit regtig geniet, veral die onderwys aan die siekbed is goed.

En u skrywe: die mediese praktyk in Suid-Afrika is van 'n hoë gehalte. Ons is derhalwe geregtig om te besluit dat daar in hierdie land die faktore aanwesig is, wat 'n doeltreffende behandeling van pasiente kan verseker. Uitsonderings is altyd moontlik en kan hier buite bespreking bly.

Maar, soos u opmerk en ek denk u is reg: daar is in toenemende mate verskeie pasiente wat vir behandeling oorssee gaan. Of die benodigde gelde deur die pasient self of deur die welwillende hulp van die pers bymekaar gemaak is maak nie saak nie. Hoofsaak is: die pasient hardloop en vra oorssee om gehelp te word. Dit is 'n baie ernstige simptoem!

Dit lyk nodig en noodsaaklik om nou eers in eie kring te vra: wat is daar verkeerd? wat is die rede dat verskeie pasiente hulle vertroue verloor het en dat daar groot somme betaal word om oorssee behandeling te kry?

1. Townsend, R. L. H. (1953): S-Afr. Tdskr. Geneesk., 27, 892.
2. Van die Redaksie (1953): S-Afr. Tdskr. Geneesk., 27, 896.

Ek voel, dit is nou die tyd om 'n onbevooroordeelde ondersoek in te stel liewers as om die pers nou al te sê wat hulle moet doen.

Ek glo dat die pers, wat hulp verleen by die bymekaar maak van gelde, baie meer klemmende rede het as ons, dokters, in ons selfvoldaanheid wel denk.

E. Janssen,

*Voormalig professor in Kindergenes-
kunde in Pretoria se Universiteit.*

Wynberg, K.P.
15 Oktober 1953.

BASIL SYPHILIS

To the Editor: It must be obvious to Dr. Lamont and Dr. Blignault (this *Journal* 10 October) that a sample estimate, in this case an unrepresentative one, is not identical with a population parameter. Observance of Denson's¹ simple rule, 'Hospital patients are for a hospital universe and give no idea of what the prevalence of conditions is in the community,' will prevent incorrect inferences being drawn from this type of data.

S. B. Sacks,
H. Selesnick

Evaton Health Centre,
P.O. Evaton,
16 October 1953.

I. Denson, P. M. (1947): *Biometrics*, **3**, 109.

MEDICAL AID AND MEDICAL BENEFIT SOCIETIES

To the Editor: In the letter from your correspondent M. M., appearing in your issue of 10 October 1953, he refers to Medical Aid Societies and Medical Benefit Societies as malignant growths because they do not give free choice of doctor.

A fundamental principle of Medical Aid Societies is the free choice of doctor. It is hoped that other medical practitioners do not have the same misconception regarding Medical Aid Societies as distinct from Medical Benefit Societies.

A. C. Sargeant,
*Secretary Southern Council of
Medical Aid Societies.*

P.O. Box 1019,
Cape Town,
16 October 1953.

ABDOMINAL PAIN IN PORPHYRIA

To the Editor: The three papers on lower abdominal pain published in the issue of the *Journal* for 26 September last provide an excuse for presenting the appended figures relating to the incidence of porphyria in South Africa. The pain which is a symptom of the acute form of this condition is frequently abdominal and the lower quadrants are not spared. Needless laparotomies had been performed on several cases, and in some were followed by deterioration and death of the patient.

Our attention at the South African Institute for Medical Research has been directed to this group of metabolic abnormalities since 1940 and it is now clear that porphyria can no longer be regarded as a rare condition in this country. Excess of porphyrin pigment has been demonstrated in the urine of 356 patients at the Institute and colleagues in other places have supplied information of another 88, making a total of 444 cases in about 13 years. Most of the Institute cases lived in the Witwatersrand area, but specimens have been received from places widely scattered over the Union.

Complete clinical notes are not available on all these cases but it has been possible to classify 291 with respect to the clinical type of the disease. Slightly more than half of these showed skin lesions only and were regarded as cases of the delayed cutaneous form of porphyria. Seventy-eight presented evidence of the acute form of the disease (viz. porphobilinogen as well as porphyrin in the urine), pain in the trunk or peripheral neuritis, neuromuscular involvement, or psychotic manifestations. These cases fell into the following groups:

	E.M.	E.F.	N.E.M.	N.E.F.	Total
Acute symptoms with no record of skin lesions	13	35	5	6	59
Acute symptoms with scars or active lesions	3	12	2	2	19

The figures are known to err on the conservative side, since many acute cases could not be included because of incomplete information.

It is hoped that this note will reinforce the comments made by Dr. Peskin¹ in one of the papers referred to and lead to greater awareness of the possibility and so to more accurate diagnosis in some cases of lower abdominal pain.

H. D. Barnes.

Biochemical Department,
South African Institute for Medical Research,
Johannesburg.
17 October 1953.

REFERENCES

1. Peskin, M. (1953): *S. Afr. Med. J.*, **27**, 39.
[See also Keet, P. W. J. (1952), *S. Afr. Med. J.*, **26**, 493; and Barnes, H. D., *S. Afr. J. Clin. Sci.* (1951), **2**, 117.—*Ed.*]

CORTISONE AND HERPES CORNEAE

To the Editor: A recent case of mine has underlined the danger of cortisone in cases of herpes corneae. Much knowledge has accumulated in the last 25 years on the epidemiology, the immunology and the biological and morphological properties of herpes simplex virus. In the field of therapy little or no progress has been made. It is natural that with a new weapon such as cortisone practitioners would use it in treating the difficult dendritic ulcer of the cornea which has failed to respond to the usual antibiotics. Cortisone is effective in certain types of keratitis, such as phlyctenular. Franks, in his paper 'The Use of Cortisone and A.C.T.H. in Diseases of the Eye' read at the South African Medical Congress in September 1952, stated that in superficial punctate keratitis and dendritics equivocal results are obtained. I go further than this and state that in these conditions cortisone is contra-indicated.

The patient, R. M., aged 63 years, had a dendritic ulcer of the left eye. It improved on local and oral aureomycin therapy, but recurred after a week. This time, local and general antibiotic therapy combined with carbolic acid failed to improve the condition. After consultation with a colleague, it was decided to put the patient on to cortisone drops 0.5% suspension hourly. There was great subjective improvement, pain being much relieved, but after a few days the ulcer had increased in depth and width, and the cornea looked like wet blotting paper. Perforation seemed imminent, and all therapy was stopped, including cortisone. I did not connect the deterioration in the cornea with cortisone until I read an editorial (Amer. J. Ophthal. **36**, 2) by Phillips Thygeson on herpes corneae.

He states: 'It is my impression . . . that the severity of the dendritic lesions has increased steadily. . . . Most significant of all, perhaps, is the fact that prior to the advent of cortisone, corneal perforation and hypopyon ulcer were unheard-of complications in herpes corneae; I have now seen 2 cortisone-treated cases with hypopyon and have heard of 3 with corneal perforation. . . .'

Cortisone has a masking effect in dendritic ulcer of the cornea. As Thygeson states, herpetic patients often feel comfortable while taking cortisone, and this leads often to a false sense of security. There are a few isolated reports of good effects from local or systemic therapy (or both) with cortisone.

As the incidence of herpes corneae seems to be increasing lately, and as this disease is the most important specific keratitis, it is as well that due publicity be given to the harmful effects which may be expected from cortisone. There are indeed cases in which dendritic keratitis has developed in patients undergoing local or systemic cortisone therapy.

Only harm can be expected from its widespread use.

J. B. Taylor.

216 Harley Chambers,
Johannesburg.
19 October 1953.

SPECIALISTS AND GENERAL PRACTITIONERS

To the Editor: The medical profession and members of the lay public have in recent times heard a great deal about the alleged tendency for the disappearance in South Africa of general practitioners as an outcome of the establishment by the South African Medical and Dental Council of a Register of medical specialists. Specialization has, unquestionably, brought about changes in general practice but that these changes are not peculiar to South Africa, are not the result of activities of the South African Medical and Dental Council, and are not of recent date, is shown by quotations in a recent issue of *Guy's Hospital Gazette* concerning opinions on the subject that were held in Britain 50 and 75 years ago respectively. The quotations I refer to read as follows:—

From Guy's Hospital Gazette 26 September 1903 (50 years ago).

The passing of the old-fashioned family doctor is a change in the direction of progress that all will lament. In the place of the friend, counsellor, and expert constitutional adviser, has sprung up the smarter, up-to-date diagnostician, who, nevertheless, has lost in solidity and reliability what he has gained by his *fin-de-siècle* theories . . . With this has come the cult of the specialist to an unheard of extent. Many who have leisure and means wander up and down Harley Street and Cavendish Square, dropping guineas as they go, obtaining interviews with charmingly-mannered men . . . The sorrow is that the genuine consultant of wide hospital experience and sound pathological training is but dimly discerned amid the throngs of flourishing physicians wielding the 'high frequency' switch, equally with the latest fat cure.

From Guy's Hospital Gazette, September 1878 (75 years ago).

True to our traditions we have invariably accepted—nay, sometimes applauded—the statements . . . which our teachers have thought fit to make, and so many of us have come to regard the Specialist as an enthusiast (if not a charlatan), who in his zeal for his pet subject has thrown to the winds all his previous knowledge of medicine on every subject except one, and whose treatment is purely local . . . Now upon analysing this conclusion we are bound to confess that our righteous indignation has in reality been poured forth upon a few only of the Specialists and special hospitals and that the sins of the few have sufficed to condemn the many. Let us then, good Guy's men though we be, take a look at the subject from an unbiased point of view and see whether after all we may not have something to learn from the Specialists.

It seems possible that the time has come again 'to take a look at the subject from an unbiased point of view . . . and with some regard for the history of the subject.'

J. C. Middleton-Shaw.

Oral and Dental Hospital,
Department of Dentistry,
University of the Witwatersrand,
Johannesburg.
19 October 1953.

HEALTH-CENTRE SERVICES

To the Editor: In discussing fundamental education and health in South Africa Professor Taylor,¹ in a recent article in this *Journal* (10 October 1953), states, 'All too often we see the medical officer in charge of a health centre, the district surgeon, and the health inspector, hardly on speaking terms, let alone co-operating at all'. That this is unfortunately so in some cases cannot be denied.

The situation does, however, demand closer attention. Doctors, dentists and nurses appointed to the health-centre service normally spent a period of time at the Institute of Family & Community Health (previously known as the Training Scheme for Health Personnel) before being posted to centres elsewhere. In a number of instances, however, doctors have been appointed direct to health centres in order to meet urgent needs. They therefore did not have the opportunity of

becoming fully acquainted with the principles and methods of health-centre practice, which quite specifically and purposively aim at the maximum possible integration with all other health facilities available to the communities served.

In addition to the categories of health personnel referred to by Professor Taylor, viz. the district surgeon and the health inspector, this integration should also involve Provincial hospitals, local-authority health departments, district-nursing and midwifery services, private practitioners, and school doctors and nurses.

The methods of health education used in health-centre practice are basically similar to those described by Professor Taylor. The aim is stimulation of a desire in the people themselves for changes in their way of living leading to betterment and progress. The community is led to realize how they can, by their own efforts and the full use of all available health resources, attain and maintain improved health.

Most types of health personnel are the product of a training in which experience and guidance in co-operation with all the health resources of a community is extremely limited. Once qualified, this fundamental defect is remedied in only the minority. Health education needs to be incorporated in the curriculum of the medical and nursing schools.

In answering his own question, 'What is being done in this country along these lines?' Professor Taylor dealt only with 'the obvious faults of our present way of doing things'. Certain achievements of some health centres have been described (G. W. Gale²; the Medical Officer-in-charge, Institute of Family & Community Health³; and S. L. Kark and J. Cassel.⁴). The last article deals with the evaluation of the health education programme at the Pholela Health Centre. Further evaluation studies are in progress at the Institute of Family & Community Health.

Julia Chesler, M.Sc., M.B., B.Ch.

Institute of Family & Community Health,
Private Bag, Merebank,
Natal.
20 October 1953.

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1. Taylor, W. N. (1953): *S. Afr. Med. J.*, **27**, 899.
2. Gale, G. W. (1949): *Ibid.*, **23**, 630.
3. Med. Off-in-charge, Institute of Family and Community Health (1951): *Ibid.*, **25**, 870.
4. Kark, S. L. and Cassel, J. (1952): *Ibid.*, **26**, 101 and 131.

PATIENTS SHOULD BE FREE TO CHOOSE

To the Editor: M. M. of Cape Town, in a letter published on 10 October, draws attention to a state of affairs which prevails in all industrial areas.

Though free choice of doctor, and an open panel if possible, has always been the policy of the Association, it was considered to be impracticable in its application to many Benefit Society appointments.

The East Rand Branch has, however, in recent years demonstrated that it is not impracticable to have open panels for all appointments. They have insisted on this principle since the inception of their Branch.

Other Branches might well take a leaf out of the book of the East Rand Branch, and so put a stop to at least one of the unsatisfactory features of Benefit Society practice.

Medical Aid practice, of course, automatically ensures the principle of free choice of doctor.

C. A. H. Green,
Chairman, Central Contract Committee.

134, Fraser Street,
Kenilworth,
Johannesburg.
20 October 1953.

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3. All photographs should be glossy prints unmounted, untrimmed and unmarked. Authors' suggestions for trimming, etc., are most suitably indicated on a duplicate print or diagram.
4. In no circumstances should original X-ray films be forwarded. Glossy prints must be submitted.
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6. Figure numbers should be marked clearly on the back of each illustration, and in every case the top of the illustration should be indicated.
7. A limited but reasonable amount of illustrative and tabular matter is allowed free. Additional material of this sort may be allowed at cost, at the discretion of the Editor.
8. All references to the literature should be inserted in the text as a superior number and listed at the end of the article in numerical order.
9. References must conform to the following convention (journal titles being abbreviated according to the *World List of Scientific Periodicals*):—
White, J. and Brown, A. B. (1946): *Arch. Clin. Med.*, 123, 167.
Books should be cited as follows:—
Smith, J. (1946): *An Introduction to Medicine*, 2nd ed., p. 174. Cape Town: John Black, Ltd.
10. All numerals to be printed as figures (i.e. not spelt out). For 'one' or 'I' always follow copy. All numerals always to be spelt out in full at the beginning of a sentence.
11. Cubic centimetre as c.c.; Cubic millimetre as c.mm.; 7.11.46 as 7 November 1946; 2nd as second; 10/6 as 10s. 6d.; Per cent. as %; 1" as 1 inch; B.P. 140/80 as Blood pressure, 140/80 mm. Hg.
12. Each paper should conclude with a summary (of about 200 words) intelligible apart from reference to the main text of the article.
- 13a. Galley proofs will be forwarded to the author in good time before publication date.
- 13b. Corrections, other than typographical errors, will be charged to the author. It is therefore most important that the MS. be submitted in its final form.
14. Reprints: An order blank for reprints, together with a price list, will be sent to the author as soon as his article reaches page-proof stage.
15. All manuscripts and correspondence should be addressed to:—The Editor, *The South African Medical Journal*, P.O. Box 643, Cape Town.

Provincial Administration of the Cape of Good Hope

HONORARY MEDICAL APPOINTMENTS: CONRADIE HOSPITAL, PINELANDS

Applications are invited from registered medical practitioners who are under the age of sixty years for appointment to the undermentioned posts at the Conradie Hospital, Pinelands.

	Posts
Surgeons	2
Assistant Surgeons	2
Physician	1
Assistant Physician	1
Gynaecologist	1
Assistant Gynaecologist	1
Ear, Nose and Throat Surgeon	1
Ophthalmic Surgeon	1
Urologist	1
Orthopaedic Surgeon	1
Anaesthetists	4
Radiologist	1
Medical Officers	10

Appointments will be made for a period of three years with effect from 1 January 1954, but shall be terminable by either party upon the giving of three months' notice in writing.

The annual honorarium payable before the thirty-first day of March of each year shall be calculated by multiplying the average daily number of in-patients treated in the hospital during the preceding calendar year by £10, provided that no member of the honorary medical staff shall be apportioned more than £105 per annum.

Applications stating age, qualifications, etc., should be forwarded to reach the Medical Superintendent, Conradie Hospital, Pinelands, not later than noon on Monday, 16 November 1953.

(1091)

Provinsiale Administrasie van die Kaap die Goeie Hoop

ERE-MEDIESE AANSTELLINGS: CONRADIE HOSPITAAL, PINELANDS

Aansoeke word ingewag van geregistreerde mediese geneeshere onder die ouderdomsgrens van sestig jaar vir aanstelling tot die volgende poste by die Conradie Hospitaal, Pinelands.

	Poste
Chirurg	2
Assistent Chirurg	2
Internis	1
Assistent Internis	1
Genikoloog	1
Assistent Genikoloog	1
Oor, Neus en Keel Chirurg	1
Oogarts	1
Uroloog	1
Ortopediese Chirurg	1
Narkotiseurs	4
Radioloog	1
Mediese Beampies	10

Lede van die ere-mediese personeel sal vir 'n tydperk van drie jaar aangestel word vanaf 1 Januarie 1954 maar aanstellings kan deur enigeen van die partye beëindig word deur skriftelike kennisgewing van drie maande.

Die jaarlikse honorarium betaalbaar aan die ere-mediese personeel voor die een-en-dertigste dag van Maart elke jaar sal bereken word deur die gemiddelde daaglikse getal binnepasiënte wat gedurende die voorafgaande kalenderjaar in die hospitaal was, met £10 vermenigvuldig, met dien verstande dat geen lid van die ere-mediese personeel meer as £105 per jaar mag ontvang nie.

Aansoeke wat melding maak van ouderdom, kwalifikasies, ens., moet gestuur word aan die Mediese Superintendent, Conradie-Hospitaal, Pinelands, om hom nie later as twaalf middag op Maandag 16 November 1953, te bereik nie.

(1091)

Provincial Administration of the Cape of Good Hope

HONORARY MEDICAL APPOINTMENTS

Applications are invited from registered medical practitioners under the age of 60 years for appointments to the undermentioned posts at Cape Town Free Dispensary.

No. of Posts	Designation
1	Honorary Physician
1	Honorary Assistant Physician
1	Honorary Surgeon
1	Honorary Gynaecologist
1	Honorary Orthopaedic Surgeon
1	Honorary Assistant Orthopaedic Surgeon
1	Honorary Ophthalmic Surgeon
1	Honorary Assistant Ophthalmic Surgeon
1	Honorary Paediatrician
1	Honorary Dermatologist
2	Honorary Assistant Dermatologists
1	Honorary Ear, Nose and Throat Surgeon
2	Honorary Anaesthetists
1	Honorary Specialist in Physical Medicine.

Appointments will be made in conformity with the Regulations relating to the Honorary Staff of Provincial Hospitals, as published in Provincial Notice 553/53 of 3 July 1953. A copy of the Regulations may be seen in the office of the Medical Superintendent, Buitenkant Street, Cape Town, to whom also applications for appointments should be submitted on or before 14 November 1953. The present Honorary Staff are eligible for re-appointment, and duties will commence as from 2 January 1954.

Honoraria are not payable at this outpatient polyclinic.

Provinsiale Administrasie van die Kaap die Goeie Hoop

ERE-MEDIESE AANSTELLINGS

Aansoeke word ingewag van geregistreerde geneeshere onder die ouderdom van sestig jaar vir aanstelling in die ondergenoemde poste by die Kaapse Vrye Apteek.

Aantal poste	Benoeming
1	Ere-internis
1	Ere-assistent-internis
1	Ere-chirurg
1	Ere-ginekoloog
1	Ere-ortopediese chirurg
1	Ere-assistent-ortopediese chirurg
1	Ere-oogarts
1	Ere-assistent-oogarts
1	Ere-kinderspessialis
1	Ere-dermatoloog
2	Ere-assistent-dermatoloog
1	Ere-oor-, neus-, en keelarts
2	Ere-narkotiseurs
1	Ere-spessialis in Fisiese medisyne.

Aanstellings word gedoen in ooreenstemming met die regulasies insake die ere-mediese personeel van provinsiale hospitale, afgekondig by Provinsiale Kennisgewing nr. 553 van 3 Julie 1953. Die regulasies kan besigtig word by die kantoor van die Mediese Superintendent, Kaapstadse Vrye Apteek, Buitenkantstraat, Kaapstad, aan wie aansoeke om aanstelling voor of op 14 November 1953 gerig moet word. Die huidige ere-personeel kan heraangetel word en die pligte neem op 2 Januarie 1954 in aanvang.

Honorariums is nie by hierdie buitepasientpolikliniek betaalbaar nie.

Rooms Required

Physician seeks one or two rooms for own use and share of waiting room. Centre of Cape Town. Write 'A. S. Z.', P.O. Box 643, Cape Town.

The Medical Association of South Africa : Die Mediese Vereniging van Suid-Afrika

AGENCY DEPARTMENT : AGENTSAP-AFDELING

KAAPSTAD : CAPE TOWN

Posbus 643, Telefoon 2-6177; P.O. Box 643, Telephone 2-6177

PRAKTYKE TE KOOP: PRACTICES FOR SALE

(1280) Eastern Cape dispensing practice with large native population. Gross receipts £3,151. Premium required £1,000 including large stock of drugs, fittings and furniture. Terms possible.

(1399) Transkei. Unopposed prescribing practice. Receipts 1950/51/52—£3,887 18s. 10d., £4,814 2s., £5,064 5s. 6d. Two appointments. Practically no night work. Premium required for goodwill £2,200. Large house for sale at £2,300. Jeep also offered for sale. Terms possible.

(1436) Goedgevestigde Karoo-praktijk. Ontvangste ongeveer £3,000 p.j. D.S. en M.O.H. aanstellings. Koopprijs £1,500 wat voorrade insluit. Gerieflike woning met spreekkamers beskikbaar teen besonder billike huurgeld.

(1488) Cape Town suburban practice. Nucleus with excellent prospect for expansion. Premium (includes drugs and furniture) £275.

(1487) Plattelandse praktyk sonder opposisie geleë in mooi omgewing. Kontantontvangste ± £2,400. Koopprijs van £1,250 sluit klandisiwaarde, alle geneesmiddels, instrumente en meubels in. Paaiemente aanvaarbaar. Goeie woonhuis en spreekkamers te huur teen £7 10s. p.m. DIT IS 'N UITSTEKENDE GELEENTHEID OM 'N GOEIE PRAKTYK IN 'N MOOI OMGEWING TE BEKOM.

ASSISTENTE/PLAASVERVANGERS VERLANG ASSISTANTS/LOCUMS REQUIRED

(1489) Boland. Pas gekwalifiseerde geneesheer benodig as assistent met oog op vennootskap. Vanaf 1 November. Aanvangsalaris £65 p.m. plus vry losies en kartoelaes as eie kar gebruik word. Uitstekende vooruitsigte.

(1490) Eastern Cape. Locum or Assistant in practice with large native population. Locum from 1 December for 1 month. Salary £3 3s. p.d. Assistant from November at £65 p.m. plus free board and lodging and car allowance. Option to purchase on terms available.

(1491) S.W.A. Plaasvervanger van einde Maart tot middel Julie 1954. £3 3s. p.d. plus losies en kartoelaes.

(1458) Transkei. Assistant required for partnership practice with 4 appointments. Commencing salary £80 per month plus board and lodging.

ASSISTANTS/LOCUMS URGENTLY REQUIRED

To act in urban and rural areas for the months DECEMBER and JANUARY. Full details on application.

SPECIALIST PHYSICIAN

(895) Partnership share for sale. Details on application.

* * *

DURBAN

112 Medical Centre, Field Street. Telephone 2-4049

PRACTICES FOR SALE : PRAKTYKE TE KOOP

(PD15) General practice established 1941 at pleasant residential and seaside resort about 10 miles south of Durban. Annual income approximately £1,000. No major surgery, minimum of minor surgery and only emergency midwifery being done at present. Brick house with consulting room attached, for sale at £5,250. Owing to ill health owner wishes to retire from practice as soon as possible. Premium £1,000 including drugs, surgery and dispensary furniture.

(PD20) Natal South Coast. General mixed prescribing practice. Premium £1,000 plus £200 for full equipment of 2 surgeries. Large proportion of the patients are European visitors, and Indians. A lucrative Native practice could be built up if dispensing was carried out. Immediate introduction.

(PD22) Natal. Prescribing and dispensing country practice. Total gross receipts for 1951, £3,344 15s. 9d.; 1952, £2,817 10s. 6d.; 1953 (3 months), £846 6s. 10d. Premium

£1,500, includes drugs, consulting room furniture and instruments. House for sale £5,500.

(PD23) Natal. Prescribing practice particularly suitable for a woman doctor interested in obstetrics and gynaecology. Total gross receipts for 1950, £1,570; 1951, £1,595; 1952, (6 months), £1,340; 1953 (3 months), £382. Premium £1,250, includes furniture, fittings, instruments, drugs and existing book debts.

(PD24) Natal South Coast. Practice suitable for doctor who does not want full time work. £250 for drugs, dressings, instruments, etc. No charge for goodwill. Small house on ½ morgen. £1,600. Immediate occupation.

(PD25) Natal. Prescribing and dispensing practice in pleasant country town. Total gross receipts June 1951 to 1952, £2,327 17s. 7d.; from 1952 to June 1953, £2,935 18s. 11d. Two appointments. Premium £1,500 includes drugs, instruments and furniture. Seller intends going overseas to specialise. Practice to be taken over as soon as purchaser desires. House for sale.

PARTNER REQUIRED

(PDX) Durban. General practitioner offers 45% partnership on 18 months' purchase. Applicants should be experienced and be able to put down a certain amount of capital. Share worth at least £2,000.

LOCUM REQUIRED

Locum required in Durban from about 18 December until 5 January. Must be bilingual and well experienced. Mixed general practice and R.M.O. appointment. £2 12s. 6d. per day, all found. Car provided if necessary.

* * *

JOHANNESBURG

Medical House, 5 Esselen Street, Telephone 44-9134-5, 44-0817
Mediese Huis, Esselenstraat 5. Telefoon 44-9134-5, 44-0817

ASSISTENTE/PLAASVERVANGERS VERLANG : ASSISTANTS/LOCUMS REQUIRED

(L/V422) Tvl. hospital town, near Johannesburg. Locum for January. Preferably bilingual Jewish doctor, with own car.

(L/V424) O.F.S. Locum is required for three weeks in January or February. Small European practice, large non-European practice. Very little night work.

(L/V426) Suburban practice, Johannesburg. Locum as from 15 November till 31 December. Salary £100 p.m. plus board and lodging. Own car necessary. Petrol and oil provided. Preferably Gentle.

(L/V440) O.V.S. hospitaaldorp. Plaasvervanger vanaf 14 Desember tot 14 Januarie, beide datums ingesluit. Moet eie kar gebruik. Afrikaanssprekend. Terme: £3 3s. per dag, plus vry losies en inwoning en petrol en olie.

(L/V442) Tvl. town, close to Johannesburg. Locum as from 30 November till 22 December. Salary £2 12s. 6d. per day, and all found. This is a purely native practice, with no night work or Sunday work.

(L/V445) O.V.S. Plaasvervanger vir of Desembermaand of Januarie of vanaf middel Desember tot middel Januarie. Salaris £2 12s. 6d. per dag, plus vry petrol en olie en 1s. per myl in distrik en losies in hotel. Algemene praktyk, met klein aanstelling, geen operasies, min nagwerk.

(L/V446) Transvaal hospital town. Assistantship offered, with definite view to partnership. Commencing salary £85 p.m. plus free petrol and oil. Preferably Gentle, fully bilingual and own car necessary. To start 1 January or 1 February.

(L/V447) Southern Rhodesia. Locum for 4 months to start 12 November. Salary £100 p.m. plus free board, petrol and oil and a travelling allowance.

(L/V448) O.V.S. Plaasvervanger vir Januarie. Terme en toe-lae om gereel te word.

(L/V451) Reef hospital town, partnership practice. Locum as from 21 November to 19 January. Own car necessary. Salary £3 3s. per day plus all found.

(L/V453) Wes-Transvaal. Assistent om so spoedig moontlik

te begin. Salaris £75 per maand, en toelaes om gereel te word. Snykundige ondervinding sal 'n aanbeveling wees.

(L/V456) Tvl. hospitaaldorp. Plaasvervanger vir November. Salaris £3 3s. per dag, alles vry en 'n kartoelae.

(L/V457) Tvl. Locum for December and January. Salary £3 3s. per day, all found and from £15 to £20 p.m. car allowance.

(L/V458) Reef town. Locum as from 6 November till 24 November. Own car necessary. Terms: £3 3s. per day, all found.

(L/V459) Randse dorp. Tweetalige assistent verlang met oog op vennootskap. Verkieslik ongetroud. Geen hospitaal, doen ligte snywerk. Salaris £720 per jaar, vry losis, kartoelae, plus 'n deel van die netto inkomste.

(L/V460) Noord-Transvaal. Plaasvervanger vir Desember en Januarie of Januarie en Februarie. Salaris £100 per maand, vry petrol, olie en diens. Eie kar nodig. Vry inwoning—eie etes.

(L/V461) Johannesburg. Locum for three weeks in November. Very easy locum. Terms to be discussed.

Natal Provincial Administration

VACANCY : SENIOR MEDICAL OFFICER : WENTWORTH HOSPITAL, DURBAN

Applications are invited from registered medical practitioners for appointment to the following post:

Chest Surgery.

Appointment is on 12 months' contract and the salary attached to the post is as follows:

Two years' service after qualification: £500 per annum plus free quarters or an allowance in lieu thereof.

Three years' service after qualification: £600 per annum plus free quarters or an allowance in lieu thereof.

Four years' service after qualification: £700 per annum plus free quarters or an allowance in lieu thereof.

Five or more years' service after qualification: £800 per annum plus free quarters or an allowance in lieu thereof.

The revision of the salary scales is at present being considered.

In addition to the foregoing salary, a temporary cost-of-living allowance is payable at prescribed Public Service Rates.

Applications, giving full details of experience and qualifications, should reach the Director of Provincial Medical Services, P.O. Box 20, Pietermaritzburg, by 14 November 1953. (AD 7841)

Natalse Provinsiale Administrasie

VAKATURE: SENIOR MEDIESE BEAMPTTE: WENTWORTH HOSPITAAL, DURBAN

Aansoek om aanstelling in die ondervermelde pos word van geregistreerde mediese praktisyne ingewag:

Borsnykunde.

Aanstelling is op 12 maande kontrak, en die salarisskaal verbonde aan die pos is as volg:

Twee jaar diens na afstudering: £500 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Drie jaar na afstudering: £600 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Vier jaar diens na afstudering: £700 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Vyf of meer jaar diens na afstudering: £800 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Die hersiening van die salarisskaal is tans onder oorweging.

'n Tydelike duurtetoelae teen heersende Staatsdienstariewe is ook betaalbaar.

Aansoek met volledige besonderhede betreffende ervaring en kwalifikasies moet aan die Direkteur van Provinsiale Mediese en Gesondheidsdienste, Posbus 20, Pietermaritzburg, gerig word, sodat hulle hom voor of op 14 November 1953 hereik. (AD 7841)

Loan Wanted

Wanted by young doctor, with own practice, a loan of £2,000; repayable £25 per month over period of 10 years. Please write to 'A. T. A.', P.O. Box 643, Cape Town.

Provincial Administration of the Cape of Good Hope

HOSPITALS DEPARTMENT

VACANCY: HONORARY MEDICAL STAFF

Applications are invited from registered medical practitioners under the age of 60 years for appointment to the post of Honorary Clinical Assistant to the Department of Dermatology at the Provincial Hospital, Port Elizabeth.

The appointment is subject to the Hospital Ordinance No. 18 of 1946 (Cape) as amended, and the rules and regulations of the Department.

Applications containing full particulars of qualifications and experience, must be addressed to the undermentioned to reach his office as soon as possible.

J. H. McLean

Medical Superintendent

Provincial Hospital

Gipson Road

Port Elizabeth

15 October 1953

(10368)

For Sale

COUNTRY ESTATE

NATAL SOUTH COAST

Delightful double-storey home, comprising large lounge, dining-room, 5 beautiful bedrooms, 2 bathrooms, water-borne sewerage, electric light, numerous out-buildings, good water supply.

This residence is situated on an eminence which commands uninterrupted land and sea views and is surrounded by well-grown indigenous trees.

The property is 15 acres in extent and includes a well-developed plantation of 5,000-6,000 bananas that will give an immediate, substantial income.

In addition to this there is an opportunity for developing a lucrative Native practice in this area.

The price is only £12,500.

Apply: M. Beverley & Co. (Pty.) Ltd., 112 Norwich Union Buildings, P.O. Box 5767, Johannesburg. Telephone: 33-8243.

Practice for Sale

East coast city. Pleasant and well-established practice (average annual receipts about £2,500 gross) and attractive easily run house with half acre of garden for sale. Particularly suitable for English speaking doctor of experience. Most of consulting work is carried out at town rooms. Price practice and house £6,500. Write 'A. S. S.', P.O. Box 643, Cape Town.

St. Monica's Home

OBSTETRICAL HOUSE SURGEON

Applications are invited for the above-named position and should reach the Honorary Superintendent, St. Monica's Home, Lion Street, Cape Town, on or before 28 November 1953.

The successful applicant will commence duty on 16 January 1953. Salary, including cost-of-living allowance, is £23 16s. 4d. per month. Free board and lodging.

Praktyk te koop

Karoo praktyk. Inkomste per jaar ±£2,000. Jong praktyk wat nog baie uitgebrei kan word. D.G. aanstelling wat ongeveer £700 per jaar werd is. Prys £700 wat medisyne en meubels insluit. Kamers teen £2 10s. per maand in hoofstraat geleë. £300 kontant en balans oor 12 maandelikse paaieimente. Skryf aan 'A. S. X.', Posbus 643, Kaapstad.

Vennootskap Aangebied

Vennootskap: uitstekende kans vir jong geneesheer. Twee dorpie naby mekaar—vennoot op elkeen. Snykunde ingesluit. Geen premie nodig. Skryf aan 'A. T. B.', Posbus 643, Kaapstad.

Provincial Administration of the Cape of Good Hope/University of Cape Town:

JOINT MEDICAL STAFF FOR GROOTE SCHUUR AND OTHER TEACHING HOSPITALS: VACANCY

1. Applications are invited from registered medical practitioners (Registered Specialists) for appointment to the following post:

Department of Medicine. 1 post of Medical Practitioner, Grade D. Salary £110 p.a. per session (3 sessions—2 sessions General Medicine, 1 session Diabetic Clinic).

2. Conditions of service are prescribed in terms of Hospital Board Service Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

3. The Joint Medical Staff is required to serve jointly the Provincial Administration of the Cape of Good Hope and the University of Cape Town.

4. Candidates must be registered specialists in the Department in which the vacancy exists.

5. A session shall be four hours per week, not necessarily continuous clinical and/or teaching work.

6. Application must be made on the prescribed form (Staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province.

7. The completed application forms must be addressed to the Director of Hospital Services, P.O. Box 2060, Cape Town, and must reach him not later than 21 November 1953.

(A562779)

South African Railways and Harbours Sick Fund

APPOINTMENT OF RAILWAY MEDICAL OFFICER: BETHAL, TRANSVAAL

Applications are invited from registered medical practitioners for appointment to the position of Railway Medical Officer, Bethal, and section of railway line Trichardt (incl.) to Maizeveld and G.C. 606 (incl.) to Mooivleijer (incl.) at a salary of £549 per annum, plus the fees and allowances prescribed in the Regulations of the Sick Fund, and with the right of private practice.

The salary will be subject to adjustment in accordance with the census of members to be taken on 1 April of each year.

The appointment will be made in terms of the Regulations of the Fund, and will be subject to termination on four months' notice being given by either side.

The successful applicant will be required to reside at Bethal, take up the appointment on a date to be arranged, and to carry out his duties in accordance with the Regulations of the Fund.

Applications should reach the District Secretary, Western Transvaal District Sick Fund Board, Room 342, Third Floor, New Station Buildings, Johannesburg, not later than 28 November 1953, and should state:

1. Full name
2. Qualifications (when and where obtained)
3. Experience (when and where obtained)
4. Date of birth
5. Country of birth
6. Whether married or single
7. Whether fully bilingual
8. Whether South African citizen
9. What Government appointment, if any, is held.

Canvassing by or on behalf of any applicant is liable to disqualify such applicant.

Any further particulars may be obtained from the District Secretary, at the above address, on application.

P. J. Klem

General Secretary

Johannesburg
31 October 1953

Provinsiale Administrasie van die Kaap die Goeie Hoop/Universiteit van Kaapstad:

GESAMENTLIKE MEDIESE PERSONEEL VIR GROOTE SCHUUR EN ANDER OPLEIDINGSHOSPITALE: VAKATURE

1. Aansoek word ingewag van geregistreerde geneeshere (Geregistreerde Spesialiste) vir aanstelling tot die volgende pos:

Departement van Geneeskunde—1 pos van Genesheer, Graad D—Salaris £110 p.j. per sessie (3 sessies—2 sessies algemene Geneeskunde, 1 sessie Diabetiese Kliniek).

2. Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragtig opgestel is.

3. Die Gesamentlike Mediese Personeel word vereis om die Provinsiale Administrasie van die Kaap die Goeie Hoop en die Universiteit van Kaapstad gesamentlik te dien.

4. Kandidate moet geregistreerde spesialiste wees in die Departement waarin die vakature bestaan.

5. 'n Sessie is vier uur per week in verband met kliniese en/of opleidingswerk, maar is nie noodwendig onafgebroke nie.

6. Aansoek moet gedoen word op die voorgeskrewe vorm (Staf 23) wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige provinsiale hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.

7. Die ingevulde aansoekvorms moet aan die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, gerig word en moet hom uiters op 21 November 1953, bereik.

(A562779)

Transvaal Provincial Administration

VACANCIES: TRANSVAAL PUBLIC HOSPITALS

Applications are invited from suitably qualified candidates for the undermentioned posts at Public Hospitals in the Transvaal.

Applications should be addressed to the Medical Superintendents of the undermentioned Hospitals concerned and should contain full particulars as to the age, professional and academic and language qualifications, experience and conjugal status of the applicant and should further indicate the earliest date upon which duties can be assumed. Copies, only, of recent testimonials to be attached.

Cost-of-living allowance payable at present to full-time employees:

Salary	Cost of Living Allowance	
	Married	Single
Over £350 per annum	£320 per annum	£100 per annum

Full-time employees receive in addition to their salaries and cost-of-living allowance, the following privileges:

Leave and rail concession.

Successful candidates will be required to submit satisfactory certificates as also to submit to a medical examination at the hospital concerned.

Application forms are obtainable from any Transvaal Provincial Hospital or the Provincial Secretary, Hospital Services Branch, P.O. Box 2060, Pretoria.

The closing date of applications for undermentioned posts will be 9 November 1953.

Hospital	Post	Emoluments	Remarks
Baragwanath Hospital	Physician	£1,800 per annum	Registered medical practitioner. Higher qualifications in Medicine a recommendation.
Board and the University of the Witwatersrand	Dep. of Medicine (1)		
Klerksdorp	Part-time General Practitioner Physician (1)	£340 per annum	Registered medical practitioner. Two sessions per week.

(42924)



Siekfondse van die Suid-Afrikaanse Spoorweë en Hawens

AANSTELLING VAN SPOORWEGDOKTER: PIETERSBURG, B'

Aansoeke word van geregistreerde mediese praktisyns ingewag vir aanstelling in die betrekking van spoorwegdokter, Pietersburg, B', d.i. die gedeelte van Pietersburg ten suide van die middel van Vorsterstraat en insluitende Iydale en die spoorwegtrajek Pietersburg (uitsluitend) tot by Opblaas (uitsluitend), teen 'n salaris van £538 per jaar, plus die gelde en toelae wat in die Regulasies van die Siekfondse voorgeskryf word, en met die reg om privaat te praktiseer.

Die salaris is onderhewig aan wysiging in ooreenstemming met die sensus van lede wat op 1 April van elke jaar afgeneem moet word.

Die aanstelling geskied kragtens die regulasies van die Siekfondse, en opsegging van dienste is onderworpe aan vier maande kennisgewing deur een van beide partye.

Die suksesvolle applikant moet op Pietersburg woon, en dienste op 'n datum wat gereël sal word aanvaar, en sy pligte ooreenkomstig die regulasies van die Siekfondse uitvoer.

Aansoeke moet die Distriksekretaris, Oos-Transvaalse Distriksiekfondse-raad, Scheidingstraat, Pretoria, nie later nie as 1 Desember 1953 bereik en applikante moet die volgende vermeld:

1. Volle naam
2. Kwalifikasies (waar en wanneer verkry)
3. Ondervinding (waar en wanneer verkry en opgedoen)
4. Datum van geboorte
5. Land van geboorte
6. Getroud of ongetroud
7. Of ten volle tweetalig
8. Of Suid-Afrikaanse burger
9. Watter staatsbetrekking, indien enige, beklee word

Werving deur of ten behoeve van enige applikant stel so 'n applikant bloot aan diskwalifikasie.

Enige verdere besonderhede wat verlang word, kan op aanvraag van die Distriksekretaris by bovermelde adres verkry word.

P. J. Klem
Hoofsekretaris

Johannesburg
31 Oktober 1953

Frontier Hospital, Queenstown

VACANCIES: HONORARY MEDICAL STAFF

Applications are invited from registered medical practitioners for appointment to eight posts of Honorary Medical Staff at the above hospital.

The appointments will be made in terms of Provincial Notice No. 553/1953 dated 3 July 1953.

Applications must be addressed to the Medical Superintendent, Frontier Hospital, Queenstown and must reach him not later than 16 November 1953. (M150023)

Frontier Hospitaal, Queenstown

VAKATURES: ERE-MEDIESE PERSONEEL

Aansoeke word ingewag van geregistreerde geneeshere vir aanstelling tot ag poste van Ere-mediese personeel aan bogenoemde hospitaal.

Die aanstellings sal geskied ingevolge Provinsiale Kennisgewing No. 553/1953 gedateer 3 Julie 1953.

Aansoeke moet aan die Mediese Superintendent, Frontier Hospitaal, Queenstown, gerig word, en moet hom nie later as 16 November 1953 bereik nie. (M150023)

Locum Required

Locum required for December and January. Eastern Province Hospital town, partnership practice. Salary £80 per month plus board and lodging and car allowance. Apply 'A. S. V.', P.O. Box 643, Cape Town

Natal Provincial Administration

VACANCY: SENIOR MEDICAL OFFICER: ADDINGTON HOSPITAL, DURBAN

Applications are invited from registered medical practitioners for appointment to a vacant post in the Department of Urology.

Appointment is on 12 months' contract and the salary attached to the post is as follows:

Two years' service after qualification: £500 per annum plus free quarters or an allowance in lieu thereof.

Three years' service after qualification: £600 per annum plus free quarters or an allowance in lieu thereof.

Four years' service after qualification: £700 per annum plus free quarters or an allowance in lieu thereof.

Five or more years' service after qualification: £800 per annum plus free quarters or an allowance in lieu thereof.

The revision of the salary scales is at present being considered.

In addition to the foregoing salary, a temporary cost-of-living allowance is payable at prescribed Public Service rates.

Applications, giving full details of experience and qualifications, should reach the Director of Provincial Medical Services, P.O. Box 20, Pietermaritzburg, by 21 November 1953.

AD7860

Natalse Provinsiale Administrasie

VAKATURE: SENIOR MEDIESE BEAMPTTE: ADDINGTON HOSPITAAL, DURBAN

Aansoeke word ingewag van geregistreerde mediese praktisyns vir aanstelling tot 'n vakante pos in die Urologie Afdeling.

Aanstelling is op 12 maande kontrak, en die salarisskaal verbonde aan die pos is as volg:

Twee jaar diens na afstudering: £500 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Drie jaar diens na afstudering: £600 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Vier jaar diens na afstudering: £700 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Vyf of meer jaar diens na afstudering: £800 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Die hersiening van die salarisskaal is tans onder oorweging. 'n Tydelike duurtetoelae teen heersende Staatsdienstariewe is ook betaalbaar.

Aansoeke met volledige besonderhede betreffende ervaring en kwalifikasies moet aan die Direkteur van Provinsiale Mediese en Gesondheidsdienste, Posbus 20, Pietermaritzburg, gerig word, so dat hulle hom voor of op 21 November 1953 bereik.

AD7860

Natal Provincial Administration

VACANCY: TEMPORARY ASSISTANT VISITING ORTHOPAEDIC SURGEON: KING EDWARD VIII HOSPITAL, DURBAN

Inclusive emoluments—£400 per month.

Canvassing of members of any Provincial or Hospital Committee will disqualify candidates.

Applications should reach the Medical Superintendent, by 14 November 1953. AD7856

Part-time Medical Officer

RUSTENBURG PLATINUM MINES MEDICAL BENEFIT SOCIETY

Applications are invited from fully qualified registered general practitioners in respect of the above appointment.

Applications must reach the Secretary of the Society, P.O. Box 143, Rustenburg, by Friday 20 November 1953.

Further particulars and details in regard to the remuneration can be obtained from the Secretary.

(This appointment has the approval of the Medical Association of South Africa—Associate Secretary.)

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